

Comal County Environmental Health OSSF Inspection Sheet

Installer Name: _____

OSSF Installer #: _____

1st Inspection Date: _____

2nd Inspection Date: _____

3rd Inspection Date: _____

Inspector Name: _____

Inspector Name: _____

Inspector Name: _____

Permit#:		Address:					
No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
1	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Site and Soil Conditions Consistent with Submitted Planning Materials		285.31(a) 285.30(b)(1)(A)(iv) 285.30(b)(1)(A)(v) 285.30(b)(1)(A)(iii) 285.30(b)(1)(A)(ii) 285.30(b)(1)(A)(i)				
2	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Setback Distances Meet Minimum Standards		285.91(10) 285.30(b)(4) 285.31(d)				
3	SEWER PIPE Proper Type Pipe from Structure to Disposal System (Cast Iron, Ductile Iron, Sch. 40, SDR 26)		285.32(a)(1)				
4	SEWER PIPE Slope from the Sewer to the Tank at least 1/8 Inch Per Foot		285.32(a)(3)				
5	SEWER PIPE Two Way Sanitary - Type Cleanout Properly Installed (Add. C/O Every 100' &/or 90 degree bends)		285.32(a)(5)				
6	PRETREATMENT Installed (if required) TCEQ Approved List PRETREATMENT Septic Tank(s) Meet Minimum Requirements		285.32(b)(1)(G) 285.32(b)(1)(E)(iii) 285.32(b)(1)(E)(iv) 285.32(b)(1)(F) 285.32(b)(1)(B) 285.32(b)(1)(C)(i) 285.32(b)(1)(C)(ii) 285.32(b)(1)(D) 285.32(b)(1)(E) 285.32(b)(1)(A) 285.32(b)(1)(E)(ii)(II) 285.32(b)(1)(E)(i) 285.32(b)(1)(E)(ii)(I)				
7	PRETREATMENT Grease Interceptors if required for commercial		285.34(d)				

Inspector Notes:

be removed from design, requires re-inspection fee

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No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
8	SEPTIC TANK Tank(s) Clearly Marked SEPTIC TANK If Single Tank, 2 Compartments Provided with Baffle SEPTIC TANK Inlet Flowline Greater than 3" and " T " Provided on Inlet and Outlet SEPTIC TANK Septic Tank(s) Meet Minimum Requirements		285.32(b)(1) (E)285.91(2)285.32(b)(1) (F)285.32(b)(1)(E) (iii)285.32(b)(1)(E)(ii) (II)285.32(b)(1)(E)(ii) (I)285.32(b)(1)(E) (i)285.32(b)(1) (D)285.32(b)(1)(C) (ii)285.32(b)(1)(C) (i)285.32(b)(1) (B)285.32(b)(1) (A)285.32(b)(1)(E)(iv)				
9	ALL TANKS Installed on 4" Sand Cushion/ Proper Backfill Used		285.32(b)(1)(F) 285.32(b)(1)(G) 285.34(b)				
10	SEPTIC TANK Inspection / Clean Out Port & Risers Provided on Tanks Buried Greater than 12" Sealed and Capped		285.38(d)				
11	SEPTIC TANK Secondary restraint system provided SEPTIC TANK Riser permanently fastened to lid or cast into tank SEPTIC TANK Riser cap protected against unauthorized intrusions		285.38(d) 285.38(e)				
12	SEPTIC TANK Tank Volume Installed						
13	PUMP TANK Volume Installed						
14	AEROBIC TREATMENT UNIT Size Installed						
15	AEROBIC TREATMENT UNIT Manufacturer AEROBIC TREATMENT UNIT Model Number						
16	DISPOSAL SYSTEM Absorptive		285.33(a)(4) 285.33(a)(1) 285.33(a)(2) 285.33(a)(3)				
17	DISPOSAL SYSTEM Leaching Chamber		285.33(a)(1) 285.33(a)(3) 285.33(a)(4) 285.33(a)(2)				
18	DISPOSAL SYSTEM Evapo-transpirative		285.33(a)(3) 285.33(a)(4) 285.33(a)(1) 285.33(a)(2)				

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No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
19	DISPOSAL SYSTEM Drip Irrigation		285.33(c)(3)(A)-(F)				
20	DISPOSAL SYSTEM Soil Substitution		285.33(d)(4)				
21	DISPOSAL SYSTEM Pumped Effluent		285.33(a)(4) 285.33(a)(3) 285.33(a)(1) 285.33(a)(2)				
22	DISPOSAL SYSTEM Gravelless Pipe		285.33(a)(3) 285.33(a)(2) 285.33(a)(4) 285.33(a)(1)				
23	DISPOSAL SYSTEM Mound		285.33(a)(3) 285.33(a)(1) 285.33(a)(2) 285.33(a)(4)				
24	DISPOSAL SYSTEM Other (describe) (Approved Design)		285.33(d)(6) 285.33(c)(4)				
25	DRAINFIELD Absorptive Drainline 3" PVC or 4" PVC						
26	DRAINFIELD Area Installed						
27	DRAINFIELD Level to within 1 inch per 25 feet and within 3 inches over entire excavation		285.33(b)(1)(A)(v)				
28	DRAINFIELD Excavation Width DRAINFIELD Excavation Depth DRAINFIELD Excavation Separation DRAINFIELD Depth of Porous Media DRAINFIELD Type of Porous Media						
29	DRAINFIELD Pipe and Gravel - Geotextile Fabric in Place		285.33(b)(1)(E)				
30	DRAINFIELD Leaching Chambers DRAINFIELD Chambers - Open End Plates w/Splash Plate, Inspection Port & Closed End Plates in Place (per manufacturers spec.)		285.33(c)(2)				
31	LOW PRESSURE DISPOSAL SYSTEM Adequate Trench Length & Width, and Adequate Separation Distance between Trenches		285.33(d)(1)(C)(i)				

**Comal County Environmental Health
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No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
32	EFFLUENT DISPOSAL SYSTEM Utilized Only by Single Family Dwelling EFFLUENT DISPOSAL SYSTEM Topographic Slopes < 2.0% EFFLUENT DISPOSAL SYSTEM Adequate Length of Drain Field (1000 Linear ft. for 2 bedrooms or Less & an additional 400 ft. for each additional bedroom) EFFLUENT DISPOSAL SYSTEM Lateral Depth of 18 inches to 3 ft. & Vertical Separation of 1ft on bottom and 2 ft. to restrictive horizon and ground water respectfully EFFLUENT DISPOSAL SYSTEM Lateral Drain Pipe (1.25 - 1.5" dia.) & Pipe Holes (3/16 - 1/4" dia. Hole Size) 5 ft. Apart		285.33(b)(3)(A) 285.33(b)(3)(A) 285.33(b)(3) (B)285.91(13) 285.33(b)(3)(D) 285.33(b)(3)(F)				
33	AEROBIC TREATMENT UNIT Is Aerobic Unit Installed According to Approved Guidelines.		285.32(c)(1)				
34	AEROBIC TREATMENT UNIT Inspection/Clean Out Port & Risers Provided AEROBIC TREATMENT UNIT Secondary restraint system provided AEROBIC TREATMENT UNIT Riser permanently fastened to lid or cast into tank AEROBIC TREATMENT UNIT Riser cap protected against unauthorized intrusions						
35	AEROBIC TREATMENT UNIT Chlorinator Properly Installed with Chlorine Tablets in Place.						
36	PUMP TANK Is the Pump Tank an approved concrete tank or other acceptable materials & construction PUMP TANK Sampling Port Provided in the Treated Effluent Line PUMP TANK Check Valve and/or Anti- Siphon Device Present When Required PUMP TANK Audible and Visual High Water Alarm Installed on Separate Circuit From Pump						
37	PUMP TANK Inspection/Clean Out Port & Risers Provided PUMP TANK Secondary restraint system provided PUMP TANK Riser permanently fastened to lid or cast into tank PUMP TANK Riser cap protected against unauthorized intrusions						
38	PUMP TANK Secondary restraint system provided						
39	PUMP TANK Electrical Connections in Approved Junction Boxes / Wiring Buried						

**Comal County Environmental Health
OSSF Inspection Sheet**

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
40	APPLICATION AREA Distribution Pipe, Fitting, Sprinkler Heads & Valve Covers Color Coded Purple?		285.33(d)(2)(G)(iii)(II) 285.33(d)(2)(G)(iii)(III) 285.33(d)(2)(G)(v) 285.33(d)(2)(G)(iii) 285.33(d)(2)(G)(iv) 285.33(d)(2)(G)(i) 285.33(d)(2)(G)(ii) 285.33(d)(2)(G)(iii)(I)				
41	APPLICATION AREA Low Angle Nozzles Used / Pressure is as required APPLICATION AREA Acceptable Area, nothing within 10 ft of sprinkler heads? APPLICATION AREA The Landscape Plan is as Designed		285.33(d)(2)(G) (i)285.33(d)(2) (A)285.33(d)(2)(F)				
42	APPLICATION AREA Area Installed						
43	PUMP TANK Meets Minimum Reserve Capacity Requirements						
44	PUMP TANK Material Type & Manufacturer						
45	PUMP TANK Type/Size of Pump Installed						



COMAL COUNTY

ENGINEER'S OFFICE

Permit of Authorization to Construct an On-Site Sewage Facility Permit Valid For One Year From Date Issued

Permit Number: 115687
Issued This Date: 01/12/2023
This permit is hereby given to: DAVID RANNE & AMY LEFEVER

To start construction of a private, on-site sewage facility located at:

1029 COVERED WAGON
SPRING BRANCH, TX 78070

Subdivision: CYPRESS LAKE GARDENS
Unit: WESTERN SKIES SECTION
Lot: 26
Block: 103
Acreage: 0.0000

APPROVED MINIMUM SIZES AS PER ATTACHED DESIGN

Type of System: Aerobic
Drip Irrigation

This permit gives permission for the construction of the above referenced on-site facility to commence. Installation must be completed by an installer holding a valid registration card from the Texas Commission on Environmental Quality (TCEQ). Installation and inspection must comply with current TCEQ and Comal County requirements.

Call (830) 608-2090 to schedule inspections.



ON-SITE SEWAGE FACILITY APPLICATION

Date January 6, 2023

Permit Number 115687

1. APPLICANT / AGENT INFORMATION

Owner Name DAVID RANNE & AMY LEFEVER
Mailing Address 1240 CHERRY CREEK BLVD.
City, State, Zip SPRING BRANCH TEXAS 78070
Phone # 830-481-5584
Email doctordaveman@gmail.com

Agent Name GREG JOHNSON, P.E.
Agent Address 170 HOLLOW OAK
City, State, Zip NEW BRAUNFELS TEXAS 78132
Phone # 830-905-2778
Email gregjohnsonpe@yahoo.com

2. LOCATION

Subdivision Name CYPRESS LAKE GARDENS . WESTERN SKIES SECTION Unit Lot 26 Block 103
Survey Name / Abstract Number Acreage
Address 1029 COVERED WAGON City SPRING BRANCH State TX Zip 78070

3. TYPE OF DEVELOPMENT

Single Family Residential
Type of Construction (House, Mobile, RV, Etc.) HOUSE

Number of Bedrooms 3

Indicate Sq Ft of Living Area 1920

Non-Single Family Residential
(Planning materials must show adequate land area for doubling the required land needed for treatment units and disposal area)

Type of Facility

Offices, Factories, Churches, Schools, Parks, Etc. - Indicate Number Of Occupants

Restaurants, Lounges, Theaters - Indicate Number of Seats

Hotel, Motel, Hospital, Nursing Home - Indicate Number of Beds

Travel Trailer/RV Parks - Indicate Number of Spaces

Miscellaneous

Estimated Cost of Construction: \$ 250,000 (Structure Only)

Is any portion of the proposed OSSF located in the United States Army Corps of Engineers (USACE) flowage easement?

Yes No (If yes, owner must provide approval from USACE for proposed OSSF improvements within the USACE flowage easement)

Source of Water Public Private Well Rainwater Collection

4. SIGNATURE OF OWNER

By signing this application, I certify that:

- The completed application and all additional information submitted does not contain any false information and does not conceal any material facts. I certify that I am the property owner or I possess the appropriate land rights necessary to make the permitted improvements on said property.
- Authorization is hereby given to the permitting authority and designated agents to enter upon the above described property for the purpose of site/soil evaluation and inspection of private sewage facilities.
- I understand that a permit of authorization to construct will not be issued until the Floodplain Administrator has performed the reviews required by the Comal County Flood Damage Prevention Order.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable.

David Ranne
Signature of Owner

9 JAN 2023
Date

*** COMAL COUNTY OFFICE OF ENVIRONMENTAL HEALTH ***

APPLICATION FOR PERMIT FOR AUTHORIZATION TO CONSTRUCT AN ON-SITE SEWAGE FACILITY AND LICENSE TO OPERATE

Planning Materials & Site Evaluation as Required Completed By GREG W. JOHNSON, P.E.

System Description PROPRIETARY; AEROBIC TREATMENT AND DRIP TUBING

Size of Septic System Required Based on Planning Materials & Soil Evaluation

Tank Size(s) (Gallons) NUWATER B-550-PC Absorption/Application Area (Sq Ft) 2000

Gallons Per Day (As Per TCEQ Table III) 260

(Sites generating more than 5000 gallons per day are required to obtain a permit through TCEQ)

Is the property located over the Edwards Recharge Zone? [] Yes [X] No

(If yes, the planning materials must be completed by a Registered Sanitarian (R.S.) or Professional Engineer (P.E.))

Is there an existing TCEQ approved WPAP for the property? [] Yes [X] No

(if yes, the R. S. or P. E. shall certify that the OSSF design complies with all provisions of the existing WPAP.)

If there is no existing WPAP, does the proposed development activity require a TCEQ approved WPAP? [] Yes [] No

(If yes, the R.S. or P. E. shall certify that the OSSF design will comply with all provisions of the proposed WPAP. A Permit to Construct will not be issued for the proposed OSSF until the proposed WPAP has been approved by the appropriate regional office.)

Is the property located over the Edwards Contributing Zone? [X] Yes [] No

Is there an existing TCEQ approval CZP for the property? [] Yes [X] No

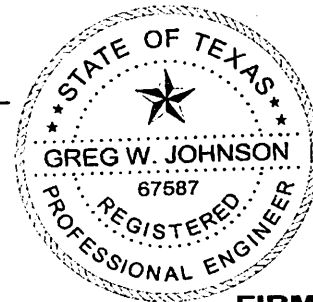
(if yes, the P.E. or R.S. shall certify that the OSSF design complies with all provisions of the existing CZP)

If there is no existing CZP, does the proposed development activity require a TCEQ approved CZP? [] Yes [X] No

(if yes, the P.E. or R.S. shall certify that the OSSF design will comply with all provisions of the proposed CZP. A Permit to construct will not be issued for the proposed OSSF until the CZP has been approved by the appropriate regional office.)

Is this property within an incorporated city? [] Yes [X] No

If yes, indicate the city:



FIRM #2585

By signing this application, I certify that:

- The information provided above is true and correct to the best of my knowledge.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable

Signature of Designer (handwritten signature)

Date January 8, 2023

AFFIDAVIT

**THE COUNTY OF COMAL
STATE OF TEXAS**

CERTIFICATION OF OSSF REQUIRING MAINTENANCE

According to Texas Commission on Environmental Quality Rules for On-Site Sewage Facilities (OSSFs), this document is filed in the Deed Records of Comal County, Texas.

I

The Texas Health and Safety Code, Chapter 366 authorizes the Texas Commission on Environmental Quality (TCEQ) to regulate on-site sewage facilities (OSSFs). Additionally, the Texas Water Code (TWC), § 5.012 and § 5.013, gives the commission primary responsibility for implementing the laws of the State of Texas relating to water and adopting rules necessary to carry out its powers and duties under the TWC. The commission, under the authority of the TWC and the Texas Health and Safety code, requires owner's to provide notice to the public that certain types of OSSFs are located on specific pieces of property. To achieve this notice, the commission requires a recorded affidavit. Additionally, the owner must provide proof of the recording to the OSSF permitting authority. This recorded affidavit is not a representation or warranty by the commission of the suitability of this OSSF, nor does it constitute any guarantee by the commission that the appropriate OSSF was installed.

II

An OSSF requiring a maintenance contract, according to 30 Texas Administrative Code §285.91(12) will be installed on the property described as (insert legal description):

WESTERN UNIT/PHASE/SECTION 103 BLOCK 26 LOT CYPRESS LAKE GARDENS SUBDIVISION
SKIES

IF NOT IN SUBDIVISION: _____ ACREAGE _____ SURVEY _____

The property is owned by (insert owner's full name): DAVID RANNE & AMY LEFEVER

This OSSF must be covered by a continuous maintenance contract for the first two years. After the initial two-year service policy, the owner of an aerobic treatment system for a single family residence shall either obtain a maintenance contract within 30 days or maintain the system personally.

Upon sale or transfer of the above-described property, the permit for the OSSF shall be transferred to the buyer or new owner. A copy of the planning materials for the OSSF can be obtained from the Comal County Engineer's Office.

WITNESS BY HAND(S) ON THIS 9th DAY OF Jan, 2023
[Signature] David Ranne
[Signature] Amy LeFever
Owner(s) signature(s) Owner (s) Printed name (s)

DAVID RANNE & AMY LEFEVER SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 9th DAY OF

January, 2023
[Signature]
Notary Public Signature

Filed and Recorded
Official Public Records
Bobbie Koepf, County Clerk
Comal County, Texas
01/10/2023 08:28:00 AM
TERRI 1 Pages(s)
202306001022



Bobbie Koepf

**THE COUNTY OF COMAL
STATE OF TEXAS**

CERTIFICATION OF SINGLE FAMILY DWELLING

According to Texas Commission of Environmental Quality Rules for On-Site Sewage Facilities, this document is filed in the Deed Records of COMAL COUNTY, TEXAS.

I

DAVID RANNE & AMY

Before me this day appeared LEFEVER, being the owners of the referenced property at 1029 COVERED WAGON. They further state that the Residence and any additional living space on this property will be occupied only by a single family.

An OSSF requiring a Certification of Single Family Dwelling, will be installed on the property described as:

WESTERN SECT 103 BLOCK 26 LOT CYPRESS LAKE GARDENS SUBDIVISION
SKIES

IF NOT IN SUBDIVISION: _____ ACREAGE _____ SURVEY _____

The property is owned by DAVID RANNE & AMY LEFEVER

WITNESS MY HAND ON THIS 9th OF DAY OF Jan, 2023.

[Signature]
OWNER (SIGNATURE)

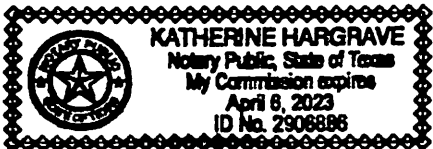
[Signature]
OWNER (SIGNATURE)

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 9th DAY OF Jan, 2023 BY

DAVID RANNE
OWNER NAME (PRINTED)

AMY LEFEVER
OWNER NAME (PRINTED)

[Signature]
Notary Public Signature



Maintenance Service Provider
15188 FM 306
Canyon Lake, TX 78133
Office/Fax (830) 964-2365



CYPRESS LAKE GARDENS, WESTERN SKIES SECTION,
BLOCK 103, LOT 26

SITE ADDRESS	INSTALLER	DATE
1029 COVERED WAGON, SPRING BRANCH, TX 78070	J.R. AVILA	01/09/2023

Routine Maintenance and Inspection Agreement

This Work for Hire Agreement (hereinafter referred to as this "Agreement") is entered into by and between DAVID RANNE & AMY LEFEVER (referred to as "Client") and Aerobic Services of South Texas (Thomas W. Hampton MP349) (hereinafter referred to as "Contractor") located at 15188 FM 306 Canyon Lake, Texas 78133 (830) 964-2365. By this Agreement the Contractor agrees to render professional service, as described herein, and the Client agrees to fulfill the terms of this Agreement as described herein.

This contract will provide for all required inspections, testing and service for your Aerobic Treatment System. The policy will include the following:

1. 3 inspections a year/services calls (at least one every 4 months), for a total of 6 over the **two year period** including inspection, adjustment and servicing of the mechanical, electrical and other applicable component parts to ensure proper function. This includes inspecting the control panel, air pumps, air filters, diffuser operation. Any alarm situation affecting the proper function of the Aerobic process will be addressed within a 48-hour time frame. Repair work on non-warranty parts will include price for parts & labor. The prices will be quoted before work is performed.
2. An effluent quality inspection consisting of a visual check for color, turbidity, scum overflow and examination for odors. A test for chlorine residual and pH will be taken and reported as necessary.
3. If any improper operation is observed, which cannot be corrected at the time of the service visit, you will be notified immediately in writing of the conditions and estimated date of correction.
4. The customer is responsible for the chlorine; it must be filled before or during the service visit.
5. Any additional visits, inspections or sample collection required by specific Municipalities, Water/River Authorities, and County Agencies the TCEQ or any other authorized regulatory agency in your jurisdiction will be covered by this policy. BOD and TSS testing is covered by this contract.

The Homeowners Manual must be strictly followed or warranties are subject to invalidation. **Pumping of sludge build-up is not covered by this policy and will result in additional charges.**

ACCESS BY CONTRACTOR

The Contractor or anyone authorized by the Contractor may enter the property at reasonable times without prior notice for the purpose of the above described Services. The contractor may access the System components including the tanks by means of excavation for the purpose of evaluations if necessary. Soil is to be replaced with the excavated material as best as possible.

Termination of Agreement

Either party may terminate this agreement within ten days with a written notice in the event of substantial failure to perform in accordance with its terms by the other party without fault of the terminating party. If this Agreement is so terminated, **the Contractor will immediately notify the appropriate health authority of the termination.**



Limit of Liability

In no event shall the Contractor be liable for indirect, consequential, incidental or punitive damages, whether in contract tort or any other theory. In no event shall the Contractor's liability for direct damages exceed the price for the services described in this Agreement.

Dispute Resolution

If a dispute between the Client and the Contractor arises that cannot be settled in good faith negotiations then the parties shall choose a mutually acceptable arbitrator and shall share the cost of the arbitration services equally.

Entire Agreement

This Agreement contains the entire agreement of the parties, and there are no other promises or conditions in any other agreement either oral or written.

Severability

If any provision of this Agreement shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of this agreement is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

HOME OWNER

DAVID RANNE & AMY LEFEVER

NAME / ENTITY

dotordaveman@gmail.com / amy lefever1@gmail.com

EMAIL

830-481-5584 / 210-430-3212

PHONE

Amy Lefever

SIGNATURE

EFFECTIVE DATE _____

EXPIRED DATE _____

INSTALLED _____

Model = _____

Blower Panel Serial = _____

SERVICE PROVIDER

Aerobic Services of South Texas Inc.

(5185 FM 306, Canyon Lake, TX 78133

(830) 964 - 3365

TOM HAMPTON

Signature of Service Provider and License #
[Thomas Hampton, OS0024597 - MP0000349]

The effective date of this initial maintenance contract shall be the date license to operate is issued.

**ON-SITE SEWERAGE FACILITY
SOIL EVALUATION REPORT INFORMATION**

Date Soil Survey Performed: January 06, 2023

Site Location: CYPRESS LAKE GARDENS - WESTERN SKIES SECTION, BLOCK 103, LOT 26

Proposed Excavation Depth: N/A

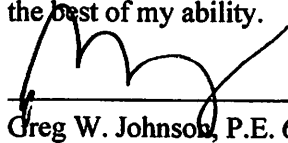
Requirements:

- At least two soil excavations must be performed on the site, at opposite ends of the proposed disposal area.
- Locations of soil boring or dug pits must be shown on the site drawing.
- For subsurface disposal, soil evaluations must be performed to a depth of at least two feet below the proposed excavation depth. For surface disposal, the surface horizon must be evaluated.
- Describe each soil horizon and identify any restrictive features on the form. Indicate depths where features appear.

SOIL BORING NUMBER <u> </u> SURFACE EVALUATION <u> </u>						
Depth (Feet)	Texture Class	Soil Texture	Gravel Analysis	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0	III	CLAY LOAM	N/A	NONE OBSERVED	LIMESTONE @ 6"	BROWN
1						
2						
3						
4						
5						

SOIL BORING NUMBER <u> </u> SURFACE EVALUATION <u> </u>						
Depth (Feet)	Texture Class	Soil Texture	Gravel Analysis	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0	SAME		AS		ABOVE	
1						
2						
3						
4						
5						

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability.



 Greg W. Johnson, P.E. 67587-F2585, S.E. 11561

01/06/2023

 Date

**AEROBIC TREATMENT
DRIP TUBING SYSTEM**

DESIGNED FOR:

DAVID RANNE & AMY LEFEVER
1240 CHERRY CREEK BLVD
SPRING BRANCH, TX 78070

SITE DESCRIPTION:

Located in Cypress Lake Gardens, Western Skies Section, Block 103, Lot 26, at 1029 Covered Wagon the proposed system will serve a three bedroom mobile residence (1920sf.) and personal shop, situated in an area with shallow Type III soil as described in the Soil Evaluation Report. Native grasses and oak trees were found throughout this property. An aerobic treatment plant utilizing drip irrigation was chosen as the most appropriate system to serve the conditions on this lot.

PROPOSED SYSTEM:

A 3-inch SCH-40 pipe discharges from the residence into a NuWater B-550 600gpd aerobic plant. Additionally, a 3-inch SCH-40 pipe discharges from the personal shop to a Liberty P380 pump tank with high level alarm. Effluent is pumped through a 2" SCH-40 PVC pipe and joint flow from the residence to the aerobic plant containing a 353-gallon pretreatment tank, an aerobic treatment plant, and a 768-gallon pump chamber containing a submersible (Franklin C1 20XC1-05P4-W115) well pump. The well pump is activated by a time controller allowing the distribution ten times per day with an 8 minute run time with float setting at 240 gallons. A high level audible and visual alarm will activate should the pump fail. Distribution is through a self flushing 100 micron disc filter (Arkal) then through a 1" SCH-40 manifold to a 2000 sf. drip tubing field, with *Netifim Bioline* drip lines set approximately two feet apart with *0.61 gph* emitters set every two feet, as per the attached schematic. A pressure regulator PMR-MF 30psi installed in the pump tank on the manifold to the field will maintain pressure at 30 psi. A 1" SCH-40 return line is installed to periodically flush the system by cycling a 1" ball valve. Solids caught in the disc filter are continuously flushed each cycle back to the pump tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Field area will be scarified and built up with 6" of Type II or Type III soil, then the drip tubing will be laid and capped with 6" of Type II or Type III soil (***NOT SAND***). The field area will be sodded with grass prior to system startup. **Tank must have at grade risers on each opening with watertight caps that must be at least 65# or have a padlock or can only be removed with tools. A secondary plug, cap, or suitable restraint must be provided below riser cap to prevent tank entry should the cap be damaged or removed, in compliance with Chapter §285.38.**

DESIGN SPECIFICATIONS:

Daily waste flow: 240 GPD Table III + 20 gpd personal shop

Pretreatment tank size: 353 Gal

Plant Size: NuWater B550 600gpd (TCEQ Approved)

Pump tank size: 768 Gal

Reserve capacity after High Level: 100 Gal (1/3 day Req'd)

Application Rate: Ra = 0.2 gal/sf

Total absorption area: Q/Ra = 260 GPD/0.20 = 1300 sf. (Actual 2000 sf.)

Total linear feet drip tubing: 1000' *Netifim Bioline* drip tubing .61 GPH

Pump requirement: 500 emitters @ .61 gph @ 30 psi = 5.0833gpm

Pump Requirement (cont.): Franklin C1 20XC1-05P4-W115 submersible well pump

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS

IN DRIP TUBING W/ NOM. DIA. 0.55" ID

$$MSV = 2 \text{ FPS } (\frac{\pi d^2}{4} * 7.48 \text{ gal/cf} * 60 \text{ sec/min})$$

$$MSV = 2(3.14159((.55/12)^2)/4)*7.48*60$$

$$MSV = 1.5 \text{ gpm PER LINE} * 3 \text{ LINES} = 4.5 \text{ GPM MIN FLOW RATE}$$

IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID

$$MSV = 2 \text{ FPS } (\frac{\pi d^2}{4} * 7.48 \text{ gal/cf} * 60 \text{ sec/min})$$

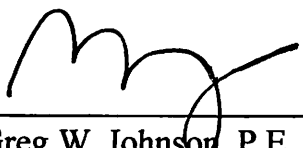
$$MSV = 2(3.14159((1.049/12)^2)/4)*7.48*60$$

$$MSV = 5.4 \text{ GPM}$$

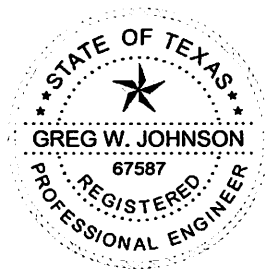
PIPE AND FITTINGS:

All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging.

Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission On Environmental Quality. (Effective December 29,2016)

 01/09/2013

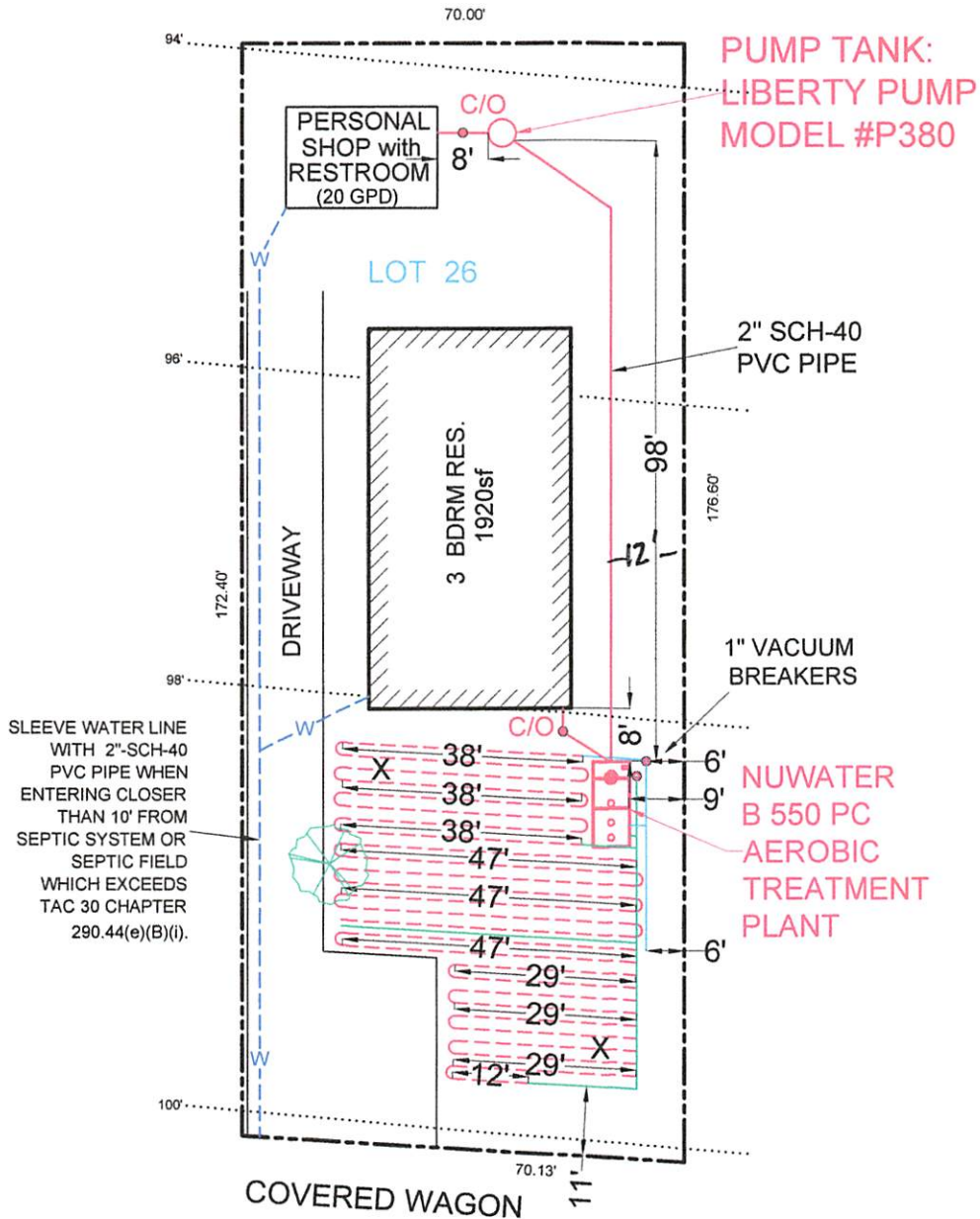
Greg W. Johnson, P.E. No. 67587 / F-2585
170 Hollow Oak
New Braunfels, Texas 78132
830/905-2778



INSTALL 2000sf OF FIELD USING 1000' OF DRIP TUBING. THERE SHALL BE NO PARKING, DRIVING OR STORAGE ON THE SEPTIC FIELD AT ANY TIME FOR ANY REASON.

*USE TWO WAY CLEAN OUTS
**USE SCH-40 OR SDR-26 TO TANK

X= TEST HOLE



SLEEVE WATER LINE WITH 2"-SCH-40 PVC PIPE WHEN ENTERING CLOSER THAN 10' FROM SEPTIC SYSTEM OR SEPTIC FIELD WHICH EXCEEDS TAC 30 CHAPTER 290.44(e)(B)(i).

**PUMP TANK:
LIBERTY PUMP
MODEL #P380**

**NUWATER
B 550 PC
AEROBIC
TREATMENT
PLANT**



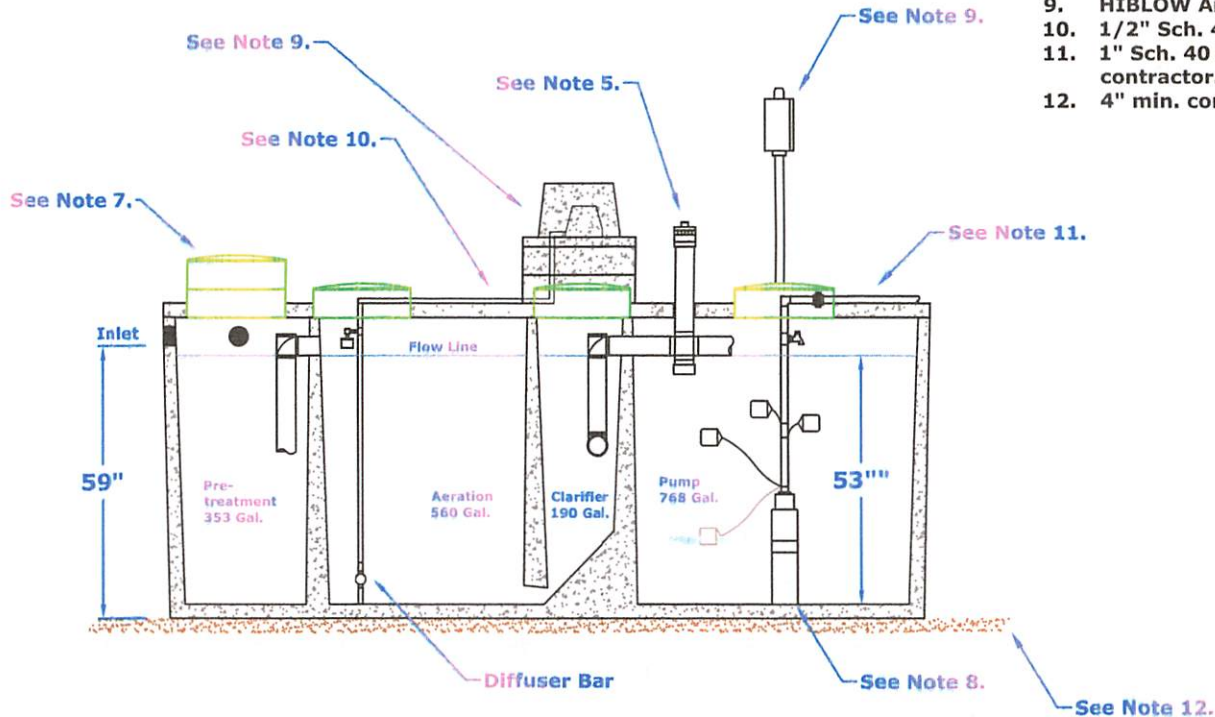
OWNER: DAVID RANNE & AMY LEFEVER		DRAWN BY: EJS III	
STREET ADDRESS: 1029 COVERED WAGON			
LEGAL DESC: CYPRESS LAKE GARDENS-WESTERN SKIES SECTION		BLOCK: 103	LOT: 26
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=30'	DATE: 1/9/2023	REVISED:

Assembly Details

OSSF



Handwritten: 01/08/2023



GENERAL NOTES:

1. Plant structure material to be precast concrete and steel.
2. Maximum burial depth is 30" from slab top to grade.
3. Weight = 14,900 lbs.
4. Treatment capacity is 600 GPD. Pump compartment set-up for a 360 GPD Flow Rate (4 bedroom, < 4,000 sq/ft living area). Please specify for additional set-up requirements. BOD Loading = 1.62 lbs. per day.
5. Standard tablet chlorinator or Optional Liquid chlorinator. NSF approved chlorinators (tablet & liquid) available.
6. Bio-Robix B-550 Control Center w/ Timer for night spray application. Optional Micro Dose (min/sec) timer available for drip applications. Electrical Requirement to be 115 Volts, 60 Hz, Single Phase, 30 AMP, Grounded Receptacle.
7. 20" Ø access riser w/ lid (Typical 4). Optional extension risers available.
8. 20 GPM 1/2 HP, high head effluent pump.
9. HIBLOW Air Compressor w/ concrete housing.
10. 1/2" Sch. 40 PVC Air Line (Max. 50 Lft from Plant).
11. 1" Sch. 40 PVC pipe to distribution system provided by contractor.
12. 4" min. compacted sand or gravel pad by Contractor

DIMENSIONS:

Outside Height: 67"
 Outside Width: 63"
 Outside Length: 164"

MINIMUM EXCAVATION DIMENSIONS:

Width: 76"
 Length: 176"

**NuWater B-550 (600 GPD)
 Aerobic Treatment Plant (Assembled)**

Model: B-550-PC-400PT

March, 2012 - Rev 1
 By: A.S.

Scale:
 * All Dimensions subject to allowable specification tolerances.

Dwg. #: ADV-B550-3



Advantage Wastewater Solutions llc.
 444 A Old Hwy No 9
 Comfort, TX 78013
 830-995-3189
 fax 830-995-4051

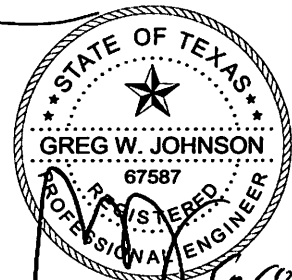
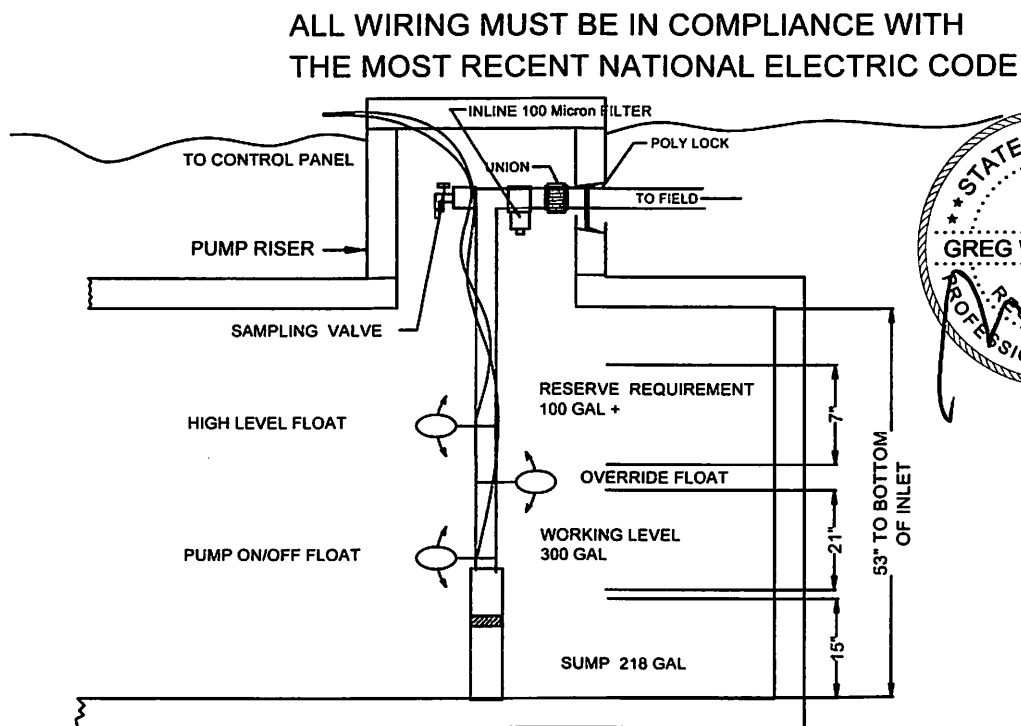
TANK NOTES:

Tanks must be set to allow a minimum of 1/8" per foot fall from the residence.

Tightlines to the tank shall be SCH-40 PVC.

A two way sanitary tee is required between residence and tank.

A minimum of 4" of sand, sandy loam, clay loam free of rock shall be placed under and around tanks



67587
01/08/2023

TYPICAL PUMP TANK CONFIGURATION
NU-WATER 550PC -400PT 768 GAL PUMP TANK

Arkal 1" Super Filter

Catalog No. 1102 0 _ _ _

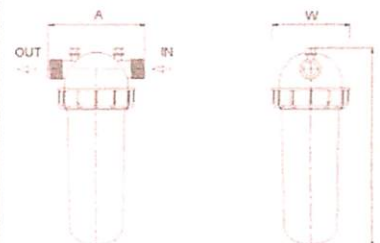
Features

- ♦ A "T" shaped filter with two 1" male threads.
- ♦ A "T" volume filter for in-line installation on 1" pipelines.
- ♦ The filter prevents clogging due to its enlarged filtering area that collects sediments and particles.
- ♦ Manufactured entirely from fiber reinforced plastic.
- ♦ A cylindrical column of grooved discs constitutes the filter element.
- ♦ Spring keeps the discs compressed.
- ♦ Screw-on filter cover.
- ♦ Filter discs are available in various filtration grades.



Technical Data

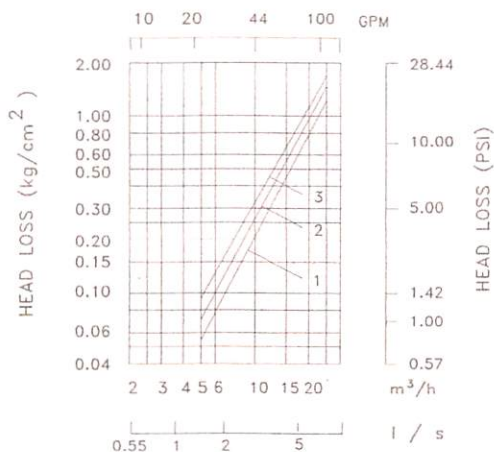
Inlet/outlet diameter	1" BSPT (male)	1" NPT (male)
	25.0 mm – nominal diameter 33.6 mm – pipe diameter (O. D.)	
Maximum pressure	10 atm	145 psi
Maximum flow rate	8 m ³ /h (1.7 l/sec)	35 gpm
General filtration area	500 cm ²	77.5 in ²
Filtration volume	600 cm ³	37 in ³
Filter length L	340 mm	13 13/32"
Filter width W	130 mm	5 3/32"
Distance between end connections A	158 mm	6 7/32"
Weight	1.420 kg	3.13 lbs.
Maximum temperature	70° C	158 °F
pH	5-11	5-11



Filtration Grades

- Blue (400 micron / 40 mesh)
- Yellow (200 micron / 80 mesh)
- Red (130 micron / 120 mesh)
- Black (100 micron / 140 mesh)
- Green (55 micron)

Head Loss Chart



PMR-MF

PRESSURE-MASTER REGULATOR - MEDIUM FLOW

Specifications

The pressure regulator shall be capable of operating at a constant, factory preset, non-adjustable outlet pressure of 6, 10, 12, 15, 20, 25, 30, 35, 40, 50, or 60 PSI (0.41, 0.69, 0.83, 1.03, 1.38, 1.72, 2.07, 2.41, 2.76, 3.45, or 4.14 bar) with a flow range between:

- 4 - 16 GPM (909 - 3634 L/hr) for 6 - 10 PSI models or
- 2 - 20 GPM (454 - 4542 L/hr) for 12 - 60 PSI models.

The pressure regulator shall maintain the nominal pressure at a minimum of 5 PSI (0.34 bar) above model inlet pressure and a maximum of 80 PSI (5.52 bar) above nominal model pressure*. Refer to the PRU performance curve to establish specific outlet pressures based on relative inlet pressure and flow rate. Always install downstream from all shut off valves. Recommended for outdoor use only. Not NSF certified.

All pressure regulator models shall be equipped with one of these inlet-x-outlet configurations:

Inlet	Outlet
3/4-inch Female National Pipe Thread (FNPT)	3/4-inch Female National Pipe Thread (FNPT)
1-inch Female National Pipe Thread (FNPT)	1-inch Female National Pipe Thread (FNPT)
1-inch Female British Standard Pipe Thread (FBSPT)	1-inch Female British Standard Pipe Thread (FBSPT)

The upper housing, lower housing, and internal molded parts shall be of engineering-grade thermoplastics with internal elastomeric seals and a reinforced elastomeric diaphragm. Regulation shall be accomplished by a fixed stainless steel compression spring, which shall be enclosed in a chamber isolated from the normal water passage.

Outlet pressure and flow shall be clearly marked on each regulator.

The pressure regulator shall carry a two-year manufacturer's warranty on materials, workmanship, and performance. Each pressure regulator shall be water tested for accuracy before departing the manufacturing facility.

The pressure regulator shall be manufactured by Senninger Irrigation in Clermont, Florida. Senninger is a Hunter Industries Company.

Physical

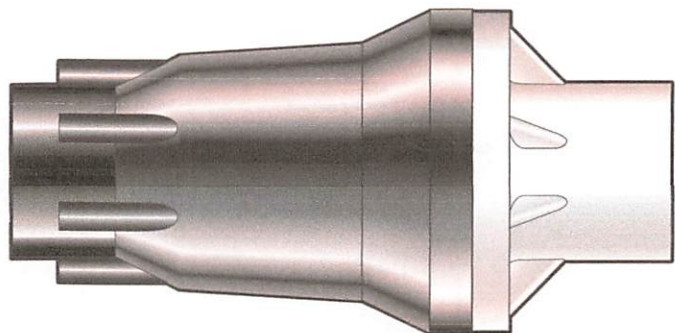
3/4" FNPT x 3/4" FNPT model *(shown on right)*

- Overall Length 5.2 inches (13.1 cm)
- Overall Width 2.5 inches (6.4 cm)

1" FNPT x 1" FNPT model

1" FBSPT x 1" FBSPT model

- Overall Length 5.8 inches (14.6 cm)
- Overall Width 2.5 inches (6.4 cm)



* Please consult factory for applications outside of recommended guidelines.



PMR-MF

PRESSURE-MASTER REGULATOR - MEDIUM FLOW

Model Numbers

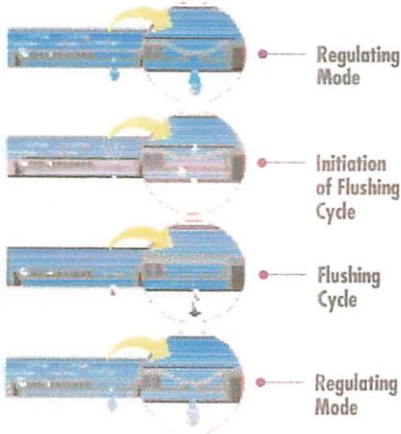
Model #	Flow Range	Preset Operating Pressure	Maximum Inlet Pressure
PMR-6 MF	4 - 16 GPM (909 - 3634 L/hr)	6 PSI (0.41 bar)	80 psi (5.51 bar)
PMR-10 MF	4 - 16 GPM (909 - 3634 L/hr)	10 PSI (0.69 bar)	90 psi (6.20 bar)
PMR-12 MF	2 - 20 GPM (454 - 4542 L/hr)	12 PSI (0.83 bar)	90 psi (6.20 bar)
PMR-15 MF	2 - 20 GPM (454 - 4542 L/hr)	15 PSI (1.03 bar)	95 psi (6.55 bar)
PMR-20 MF	2 - 20 GPM (454 - 4542 L/hr)	20 PSI (1.38 bar)	100 psi (6.89 bar)
PMR-25 MF	2 - 20 GPM (454 - 4542 L/hr)	25 PSI (1.72 bar)	105 psi (7.24 bar)
PMR-30 MF	2 - 20 GPM (454 - 4542 L/hr)	30 PSI (2.07 bar)	110 psi (7.58 bar)
PMR-35 MF	2 - 20 GPM (454 - 4542 L/hr)	35 PSI (2.41 bar)	115 psi (7.93 bar)
PMR-40 MF	2 - 20 GPM (454 - 4542 L/hr)	40 PSI (2.76 bar)	120 psi (8.27 bar)
PMR-50 MF	2 - 20 GPM (454 - 4542 L/hr)	50 PSI (3.45 bar)	130 psi (8.96 bar)
PMR-60 MF	2 - 20 GPM (454 - 4542 L/hr)	60 PSI (4.14 bar)	140 psi (9.65 bar)

PMR-MF Pressure-Master Regulator - Medium Flow. All dimensions are in inches unless otherwise noted. © 2014 Senninger. All rights reserved. Senninger is a registered trademark of Senninger. PMR-MF is a registered trademark of Senninger. All other trademarks are the property of their respective owners.



Bioline® Driperline

Pressure Compensating Driperline for Wastewater



BioLine's Self-Cleaning, Pressure Compensating Dripper is a fully self-contained unit molded to the interior wall of the dripper tubing.

As shown at left, BioLine is continuously self-cleaning during operation, not just at the beginning and end of a cycle. The result is dependable, dog free operation, year after year.



Product Advantages

The Proven Performer

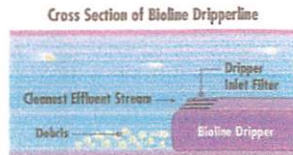
- Tens of millions of feet used in wastewater today.
- BioLine is permitted in every state allowing drip disposal.
- Backed by the largest, most quality-driven manufacturer of drip products in the U.S.
- Preferred choice of major wastewater designers and regulators.
- Proven track record of success for many years of hard use in wastewater applications.

Quality Manufacturing with Specifications Designed to Meet Your Needs

- Pressure compensating drippers assure the highest application uniformity - even on sloped or rolling terrain.
- Excellent uniformity with runs of 400 feet or more - reducing installation costs.
- Highest quality-control standards in the industry: Cv of 0.25 (coefficient of manufacturer's variation).
- A selection of flows and spacings to satisfy the designer's demand for almost any application rate.

Long-Term Reliability

- Protection against plugging:
 - Dripper inlet raised 0.27" above wall of tubing to prevent sediment from entering dripper.
 - Drippers impregnated with Vinyzene to prevent buildup of microbial slime.
 - Unique self-flushing mechanism passes small particles before they can build up.



Root Safe

- A physical barrier on each BioLine dripper helps prevent root intrusion.
- Protection never wears out - never depletes - releases nothing to the environment.
- Working reliably for up to 15 years in subsurface wastewater installations.
- Additional security of chemical root inhibition with Techfilter - supplies Trifluralin to the entire system, effectively inhibiting root growth to the dripper outlets.



Applications

- For domestic strength wastewater disposal.
- Installed following a treatment process.
- Can be successfully used on straight septic effluent with proper design, filtration and operation.
- Suitable for reuse applications using municipally treated effluent designated for irrigation water.

Specifications

Wall thickness (mil): 45*

Nominal flow rates (GPH): .4, .6, .9*

Common spacings: 12", 18", 24"*

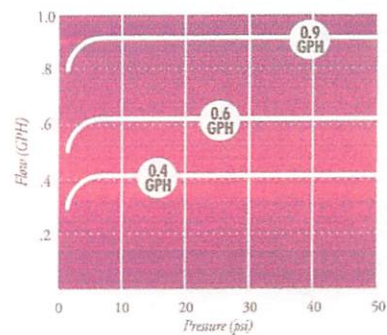
Recommended filtration: 120 mesh

Inside diameter: .570*

Color: Purple tubing indicates non-potable source

*Additional flows, spacings, and pipe sizes available by request. Please contact Netafim USA Customer Service for details.

BIOLINE Flow Rate vs. Pressure



NETAFIM USA
 5470 E. Home Ave. • Fresno, CA 93727
 888.638.2346 • 559.453.6800
 FAX 800.695.4753
www.netafimusa.com

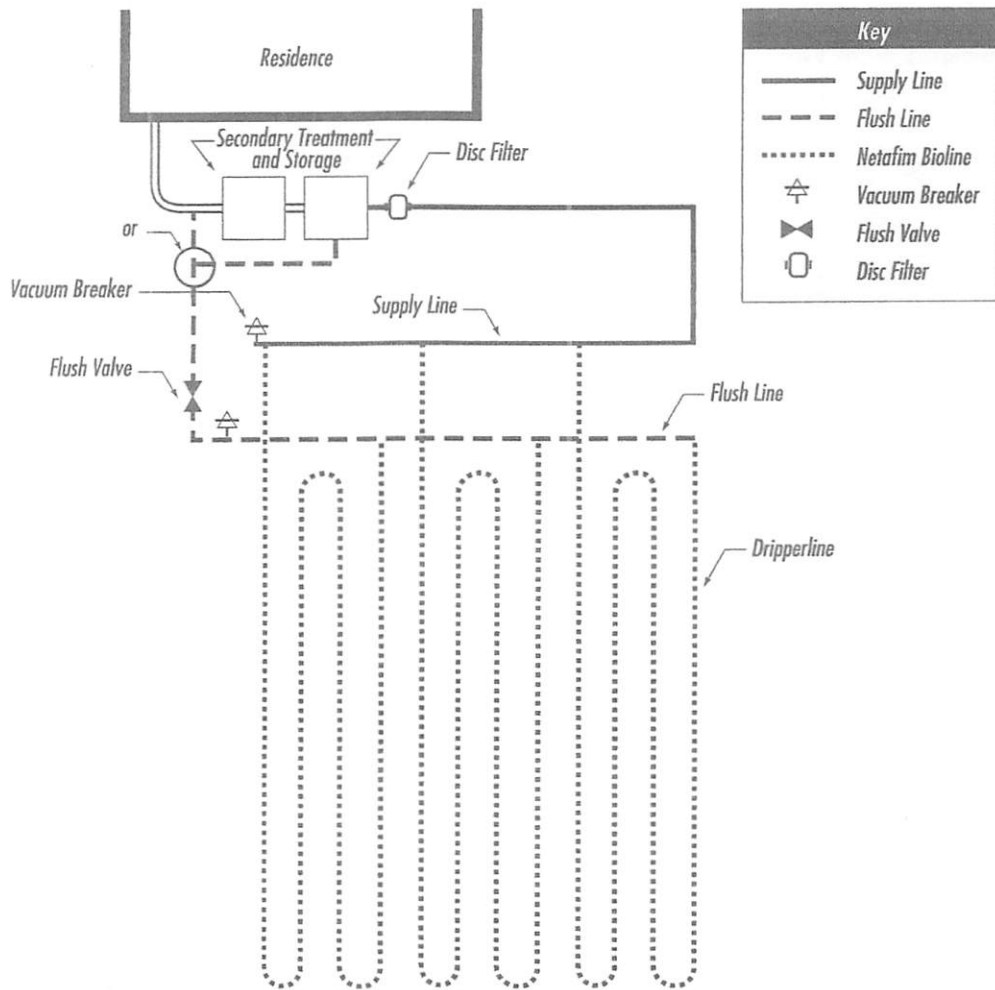
NETAFIM WASTEWATER DISPERSAL SYSTEM DESIGN GUIDE

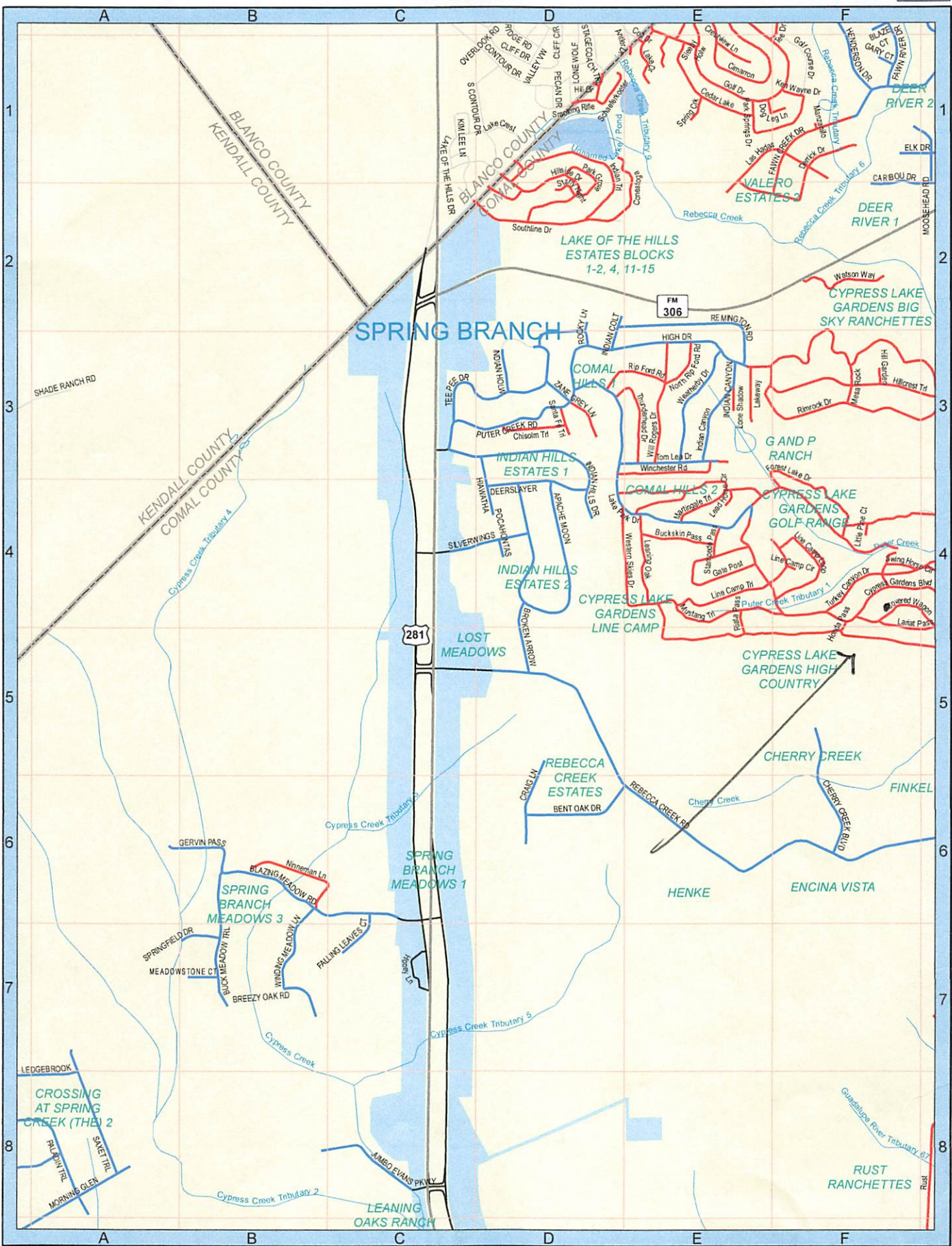
SAMPLE DESIGNS

SINGLE TRENCH LAYOUT

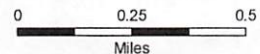
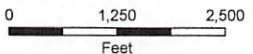
Rectangular field with supply and flush manifold on same side and in same trench;

- Locate supply and flush manifold in same trench
- Dripperlines are looped at the end opposite the supply and flush manifolds
- The longest Bioline length should not exceed 400 ft. Drip fields 200 ft. in length might loop the Bioline once; drip dispersal fields under 100 ft. might be looped twice, as illustrated





SEE PAGE 14



GENERAL WARRANTY DEED

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

Date: December 30, 2022

Grantor: DAVID RANNE, a single person

Grantor's Mailing Address: 1240 Cherry Creek Blvd, Spring Branch, TX 78070

Grantee: DAVID RANNE AND AMY LEFEVER

Grantee's Mailing Address: 1240 Cherry Creek Blvd, Spring Branch, TX 78070

Consideration: The sum of TEN DOLLARS (\$10.00) cash, and other good and valuable consideration Property (including any improvements):

Lot 26, Block 103, Cypress Lake Gardens, Western Skies Section, an Addition In Comal County, Texas, according to the Map or Plat recorded in Volume 3, Page 18, Map and Plat Recors of Comal County, Texas

Reservations from Conveyance: None

Exceptions to Conveyance and Warranty:

This conveyance is made and accepted subject to all restrictions, encumbrances, easements, covenants, and conditions relating to the Property filed for record in Comal County, Texas.

Grantor, for the Consideration, and subject to the Reservations from the Exceptions to Conveyance and Warranty, grants, sells, and conveys to Grantee the property together with all and singular the rights and appurtenances thereto in any way belonging, to have and to hold to Grantee and Grantee's successors and assigns forever. Grantor binds Grantor and Grantor's successors and assigns to warranty and forever defend all and singular the Property to Grantee and Grantee's successors and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, except as to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty.

When the context requires, singular nouns and pronouns include the plural.

(Signatures on following page)

EXECUTED on the date first above written.



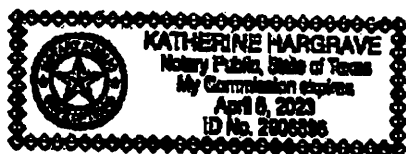
DAVID RANNE

STATE OF TEXAS

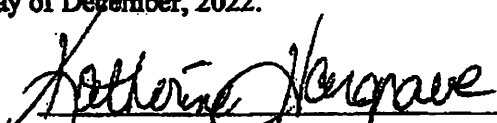
COUNTY OF COMAL

Before me, Katherine Hargrave, a notary public, on this day personally appeared DAVID RANNE, known to me (or proved to me on the oath of _____) to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 5th day of December, 2022.



(personalized seal)



Notary Public in and for the
State of Texas

Filed and Recorded
Official Public Records
Bobbie Koepf, County Clerk
Comal County, Texas
01/03/2023 09:31:21 AM
LAURA 2 Pages(s)
202306000073

 *Bobbie Koepf*



COMAL COUNTY
ENGINEER'S OFFICE

**OSSF DEVELOPMENT APPLICATION
CHECKLIST**

Staff will complete shaded items

		115687
<i>Date Received</i>	<i>Initials</i>	<i>Permit Number</i>

Instructions:

Place a check mark next to all items that apply. For items that do not apply, place "N/A". This OSSF Development Application Checklist must accompany the completed application.

OSSF Permit

- Completed Application for Permit for Authorization to Construct an On-Site Sewage Facility and License to Operate
- Site/Soil Evaluation Completed by a Certified Site Evaluator or a Professional Engineer
- Planning Materials of the OSSF as Required by the TCEQ Rules for OSSF Chapter 285. Planning Materials shall consist of a scaled design and all system specifications.
- Required Permit Fee - See Attached Fee Schedule
- Copy of Recorded Deed
- Surface Application/Aerobic Treatment System
 - Recorded Certification of OSSF Requiring Maintenance/Affidavit to the Public
 - Signed Maintenance Contract with Effective Date as Issuance of License to Operate

I affirm that I have provided all information required for my OSSF Development Application and that this application constitutes a completed OSSF Development Application.

Signature of Applicant

01/10/2023

Date

_____ COMPLETE APPLICATION Check No. _____ Receipt No. _____

INCOMPLETE APPLICATION _____ (Missing Items Circled, Application Refused)
--