

Preliminary Field Check For Drip Systems



COMAL COUNTY

ENGINEER'S OFFICE

RE: *949 Cimarron Drive*
Lake of the Hills
Lot 182 – Block 22

Dear Property Owner & Agent,

Thank you for your submission. We have reviewed the planning materials for the referenced permit application, and unfortunately, they are insufficient. To proceed with processing this permit, we require the following:

1. Our office will be conducting a site visit on 04-05-2024.
2. Revise accordingly and resubmit.

If you have any questions, you can email me or call the office.

Thank You,

| **Brandon Olvera** | **Designated Representative OS0034792** |

| Comal County | www.cceo.org | f: 830-608-2078 | e: olverb@co.comal.tx.us |

RECEIVED

By Kathy Griffin at 3:02 pm, Apr 05, 2024

OSSF DEVELOPMENT APPLICATION CHECKLIST

Staff will complete shaded items



COMAL COUNTY
ENGINEER'S OFFICE

Date Received

Initials

117354
Permit Number

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.

[Handwritten Signature]

Signature of Applicant

4/3/24

Date

COMPLETE APPLICATION
Check No. _____ Receipt No. _____

INCOMPLETE APPLICATION
(Missing Items Circled, Application Refused)

ON-SITE SEWAGE FACILITY APPLICATION

Date 4-3-24

Permit Number 117354

1. APPLICANT / AGENT INFORMATION

Owner Name Angelica Aguilar Sanchez
Mailing Address 122 Brienne
City, State, Zip Spring Branch, TX 78070
Phone # 830-714-2100
Email adomezangelica1983@yahoo.com

Agent Name Mario Howland
Agent Address 9131 Alpine Trail ST
City, State, Zip SA TX 78250
Phone # 210-389-8228
Email mhowland@yahoo.com

2. LOCATION

Subdivision Name LAKE OF HILLS Unit _____ Lot 182 Block 22
Survey Name / Abstract Number _____ Acreage _____
Address 949 Cimarron drive 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 2,000

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: \$ \$270K (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

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.

Signature of Owner Angelica Aguilar

Date 4-3-24



ON-SITE SEWAGE FACILITY APPLICATION

Planning Materials & Site Evaluation as Required Completed By Martin Howland, Jr.

System Description Aerobic Drip 600 GPD

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

Tank Size(s) (Gallons) 600 GPD Absorption/Application Area (Sq Ft) 1,620 sq ft

Gallons Per Day (As Per TCEQ Table III) 240 GPD

(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 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 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? Yes No

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

(If yes, the R.S. or P.E. 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 No

If yes, indicate the city: _____

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]
Signature of Designer

4/4/24
Date



1/1 CB

AFFIDAVIT TO THE PUBLIC

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 (OSSF's), this document is filed in the Deed Records of Comal County, Texas.

The Texas Health and Safety Code, Chapter 366 authorizes the Texas Commission on Environmental Quality (commission) 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.

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): 949 Cimarron drive Spring branch, TX 78070
Lake of the Hills Estates, Block 22, Lot 182

The property is owned by (insert owner's full name): Angelica Aguilar Sanchez

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.

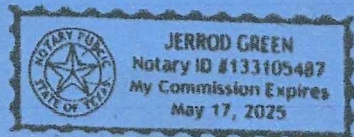
WITNESS BY HAND(S) ON THIS 1 DAY OF April, 2024

[Signature]
Owner(s) signature(s)

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 1 DAY OF April, 2024

[Signature]
Notary Public, State of Texas

Filed and Recorded
Official Public Records
Bobbie Koepf, County Clerk
Comal County, Texas
04/03/2024 02:45:46 PM
LAURA 1 Page(s)
202406009984





WASTEWATER TREATMENT SYSTEM MAINTENANCE CONTRACT

Customer	Residential	Initial Contract
Angelica Gomez	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Site Address	Agency	
949 Cimarron, Spring Branch, TX 78070	Comal County	
Email	Phone	Permit Number
gomezangelica1983@yahoo.com	(830) 714-2160	
System Details		
Treatment: Aerobic Drip Emitters / System: Clearstream Wastewater Systems 600 Max GPD		

AGREEMENT

I. General:

This work for hire agreement (hereinafter referred to as "Agreement") is entered into by and between the Client and Luna Environmental, LLC (hereinafter referred to as "Contractor"), located at 4222 FM 482 New Braunfels, Texas 78132. By this agreement, Contractor agrees to render services, as described herein, and Client agrees to fulfill his/her/their responsibilities under the agreement as described herein.

II. Dates:

This agreement is for an initial 2-year maintenance contract and begins once the License to Operate (LTO) has been issued.

III. Services by Contractor:

1. Inspect and perform routine maintenance on the On-Site Sewage Facility ("OSSF") in compliance with code, regulations, and/or rules of the Texas Commission on Environmental Quality ("TCEQ") and county in which the OSSF is located and the manufacturer's requirements, at a frequency of approximately once every four (4) months.
2. Inspection, adjustment, and servicing of the mechanical, electrical, and other components to ensure proper functioning. This includes inspecting control panels, air pumps, air filters, diffusers, floats, and spray heads.
3. Effluent Inspection will include the following: effluent quality (color, turbidity, overflow, and odor), testing effluent chlorine and pH levels, when necessary, alarm function, filters, operation of effluent pump and chlorinator. Unless otherwise agreed to, Contractor does not provide chlorine. BOD and TSS annually on commercial accounts, additional charges apply.
4. Notify Client of any repairs needed to keep OSSF in proper working condition and up to regulatory standards. Items under warranty may be repaired while the technician is on-site. Additional charges may apply for labor and service calls. Repair quotes of non-warranty items must be approved by Client before work is performed.
5. Report to the appropriate regulatory authority and to Client, as required by the State of Texas' on-site rules and, if required, TCEQ or County rules. All findings must be reported to the appropriate regulatory authority within 14 days.
6. Visit site within 48 hours of a service request.
7. Provide Customer Support line at 855-560-9909.

IV. Client Responsibilities:

1. Maintain Chlorinator and proper chlorine supply, unless otherwise specified.
2. Provide all necessary lawn or yard maintenance and remove all obstructions, including dogs and other animals as needed to allow the OSSF to function properly and the Contractor easy and safe access to all parts of
3. Immediately notify Contractor of any alarms or system problems.
4. Have tanks pumped out as directed by manufacturer, typically every 3 years.
5. Be available by text, phone, or in person when the Contractor is on site in case of required repair approvals or questions.
6. Maintain site drainage to prevent adverse effects on OSSF.
7. Promptly pay Contractor's bills, fees, and invoices in full.

V. Access By Contractor:

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 repairs and services described herein.

VI. Termination of This Agreement:

Either party may terminate this agreement with 30 days' written notice in the event of the other party's substantive failure to perform in accordance with this agreement without fault of the terminating party. Is this agreement is terminated, the Contractor will notify the appropriate regulatory authority.

VII. Limitation 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 of liability. In no event shall the Contractor's liability for the direct damages exceed payments by the Client under this agreement.

VIII. Payment Terms:

The fee for this agreement only covers the services described herein. This fee does not cover equipment or labor for non-warranty repairs, labor for warranty repairs, or service charges resulting from unscheduled, Client requested trips to the Client's OSSF. Payments not received within 30 days from the date of invoicing will be subject to a \$30.00 late penalty and or a 1.5% monthly carrying charge, whichever is greater. By signing this contract, the Client authorizes the Contractor to remove any parts which were installed but not paid for at the end of 30 days. The Client is still responsible for any labor costs associated with the installation and removal of said parts. All invoices are due upon receipt by Client.

IX. 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 held valid and enforceable. If a court finds that any provision of this agreement is invalid or unenforceable, 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.

Angelica Gomez

Luna Environmental / Ryan Seidensticker

DocuSigned by: Customer Name

Maintenance Provider Name

Angelica Aguilar

Ryan Seidensticker

License # MP0001708

2A82D46470FF43C...

Customer Signature

Maintenance Provider Signature

Additional Comments / Special Terms

OSSF Soil & Site Evaluation

Page 1 (Soil & Site Evaluation)

Date Performed: 3/20/24

Property Owner: Angelica Sanchez

Site Location: 949 Cinnamon Spring Branch TX 78070 Proposed Excavation Depth: 5'

REQUIREMENTS:

At least two soil excavations must be performed on the site, at opposite ends of the proposed disposal area. Locations of soil borings 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 disposal field excavation depth. For surface disposal, the surface horizon must be evaluated. Describe each soil horizon and identify any restrictive features on this form. Indicate depths where features appear.

Soil Boring Number: <u>1</u>					
Depth (Feet)	Texture Class	Gravel Analysis (If Applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
1 FT. *	Clay				
2 FT.	Clay	Bedrock		@ Surface	
3 FT.	Clay	@ Surface	NA		Rock @
4 FT.	Loam				Surface
5 FT.					

Soil Boring Number: <u>2</u>					
Depth (Feet)	Texture Class	Gravel Analysis (If Applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
1 FT.	Clay				
2 FT.	Clay	Bedrock			
3 FT.	Clay	@	NA	@ Surface	Rock @
4 FT.	Loam	Surface			Surface
5 FT.					

FEATURES OF SITE AREA

- Presence of 100 year flood zone Yes No
- Presence of upper water shed Yes No
- Presence of adjacent ponds, streams, water impoundments Yes No
- Existing or proposed water well in nearby area (within 150 feet) Yes No
- Ground Slope 2 %

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

[Signature]
 (Signature of person performing evaluation)
 Form # PA5/030204-Final

3/20/24
 (Date)

05 38022 SE
 Registration Number and Type



Higher Ratings LLC
Majid Howiatdost JR.

9131 Alpine Trail San Antonio TX, 7850

Designed for:

Angelica Sanchez

**NEW AEROBIC SEPTIC SYSTEM
DRIP IRRIGATION**

Residential Septic System @
Site: 949 Cimarron
Spring Branch, TX 78070

This Design includes an attached drawing:
Dated 03-22-2024
Use Clear Stream 600 GPD or Equivalent ATU

Design Specifications:

This site will consist of a 3 Bedroom residential structure with maximum daily load capacity of 240 Gal/day.

Pump tank/chlorine contact chamber capacity:	Min: 500 Gal
Design application rate: Ra	0.20 gal/sq.ft./day
Soil Profile determined:	Clay Loam Type III bedrock at surface
Dosing cycle quantity:	50-70 Gallons
Number of dosing cycles per day:	8
Dosing Time (min)	6 min
Type of float switch:	Mercury Float Switch
Total Absorption Area $Q/Ra = 240\text{gpd}/0.2$	1,200 S.F.
Total Drip Line Required	600 LF
Total Drip Line Designed	810 LF
Total Absorption Area Designed	1,620 SF
Filter	100-130 Micron Filter
Flush valve	1" Ball Valve
Pump Requirement:	405 emitters @ 0.61 GPH @ 30'



HIGHER RATINGS LLC
9131 ALPINE TRAILS SAN ANTONIO TX 78250
TEL. (210) 389-8228

Dosing Pump:	4.11 gpm: Franklin C1 submersible well pump or equivalent
Chlorinate:	none
Max slope of the field:	< 15 (%)
Means of preventing siphoning:	vacuum breakers
Type of forced main required:	1" schedule 40
Diameter of supply pipe:	1"
Pressure of adjusting valves to be installed:	30 psi regulator PMR MF30
Offsets:	Property lines, wells, easements, waterlines, structures, swimming pools, ponds, etc. Shall be strictly adhered to as required by the latest Texas Natural Resources Conservation Commission (TNRCC) construction standards.

Pump controls must have National Electrical Manufacturing Association (NEMA) Approval. A PVC union shall be placed above the pump to allow the easy pump removal.

Calculation of Field Size

Three (3) Bedroom home with water saving devices allowed 240 GPD effluent flow. Assume an application rate of 15.6 Sq.Ft. Per gallon per day.

$Q = 240 \text{ GPD}$

$Ra = 0.2 \text{ gal/sq.ft.}$

$Q/Ra = 240/0.02 = 1,200 \text{ Sq. Ft.}$

A min of 600 LF of drip tubing is needed to satisfy the demand of 3 the bedroom dwelling. Install 810 LF of drip tubing on top of 12" of sandy loam and cap with another 6" of sandy loam.

Pipes and Fittings

All pipes and fittings in this system shall be schedule 40 PVC. All joints shall be sealed with approved PVC cement. The Supply and Return lines shall be 1 inch in diameter. Drip line shall be space 2 feet apart and are rated at 0.61 GPH. Vacuum breaker installed on the highest points of the supply and return line. Return line will flush the system periodically into the pump tank.



[Handwritten signature]

HIGHER RATINGS LLC
9131 ALPINE TRAILS SAN ANTONIO TX 78250
TEL. (210) 389-8228

Site Preparation

The area selected for the drip irrigation shall be scarified and built up with a min. of 12" of sandy loam (Type II or III soil) before any drip tubing can be installed. Cap with another 6" of sandy loam and spread grass seed and cover with curlex erosion control or lay sod over the field prior to system start up.

Provisions for Emergencies

A warning system shall be added to the pump tank on a separate circuit from the pump circuit to provide warning of a failure of the system. This aerobic system has a 24 month service agreement which includes emergency service (see attached copy of service contract).

Tank Sizes

A 445 gallon trash tank, a 619 gallon aeration tank and the pump tank shall have a capacity of 795 gallons. A Clear Stream NC3T 600 GPD ATU will be used.

Inspections

Inspections are to be conducted by the county in which the OSSF is located.



[Handwritten signature]

HIGHER RATINGS LLC
9131 ALPINE TRAILS SAN ANTONIO TX 78250
TEL. (210) 389-8228

MAP LEGEND

Disposal Area = 1,620 Sq Ft
 Total L.F. drip designed = 810 LF

There shall be no driving, parking, or storage on the disposal field

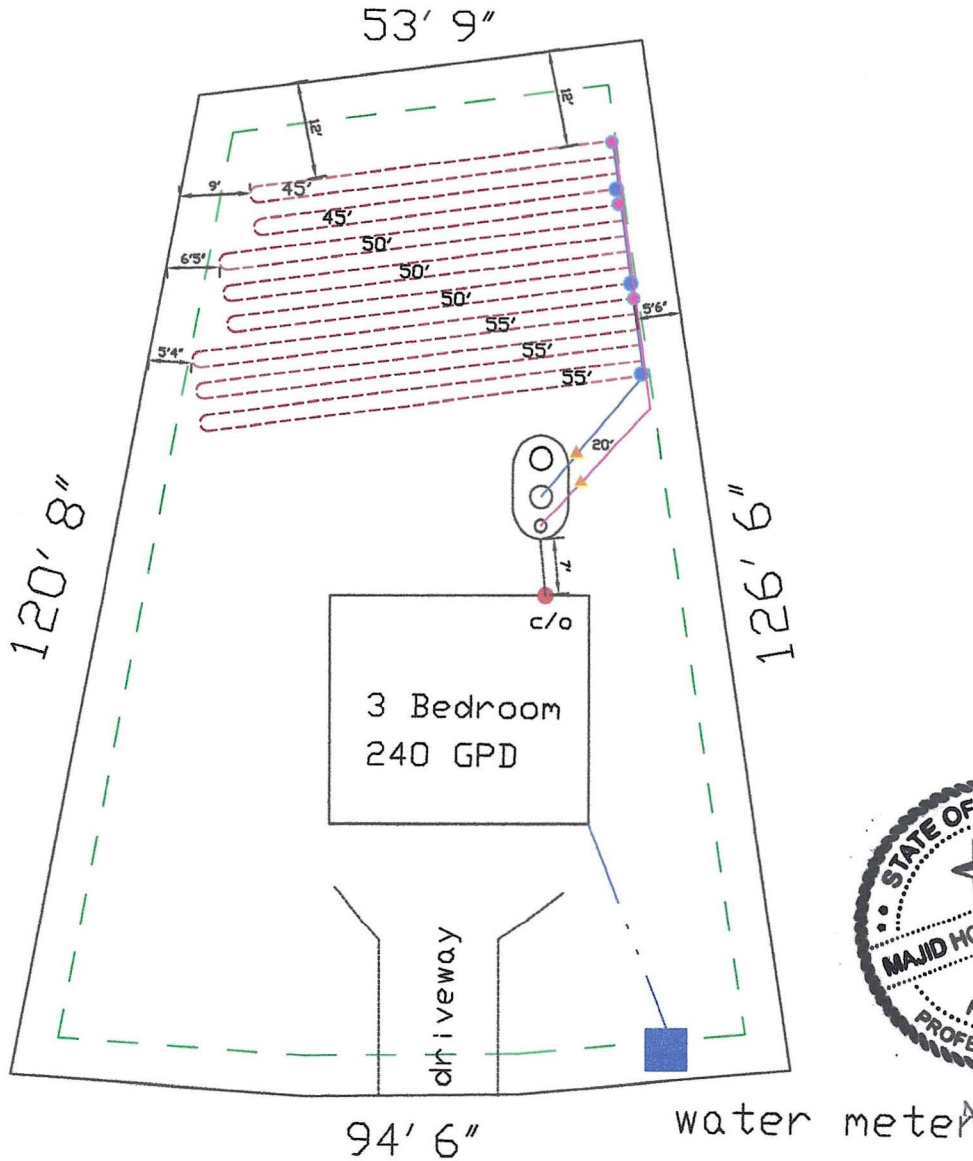
Field to be scarified and built up with 12" of imported sandyloam. The drip tube will be installed on the 12" of sandyloam then capped with another 6" of sandyloam.

Clear Stream
 NC3T 600 GPD ATU

Return line to be flushed periodically to pretreatment tank compartment.

Use a 3" or 4" 2 way clean out

- 5' ossf set back
- 2 way Clean Out
- Supply port
- Return port
- Supply line
- Return line
- Test holes
- water line
- Vacuum Breaker
- property corners



Cimarron

DATE: 08-08-2004
 JOB NO. 24000007
 DRAWN BY: MAB
 TITLE: OSSF Design
 SHEET:

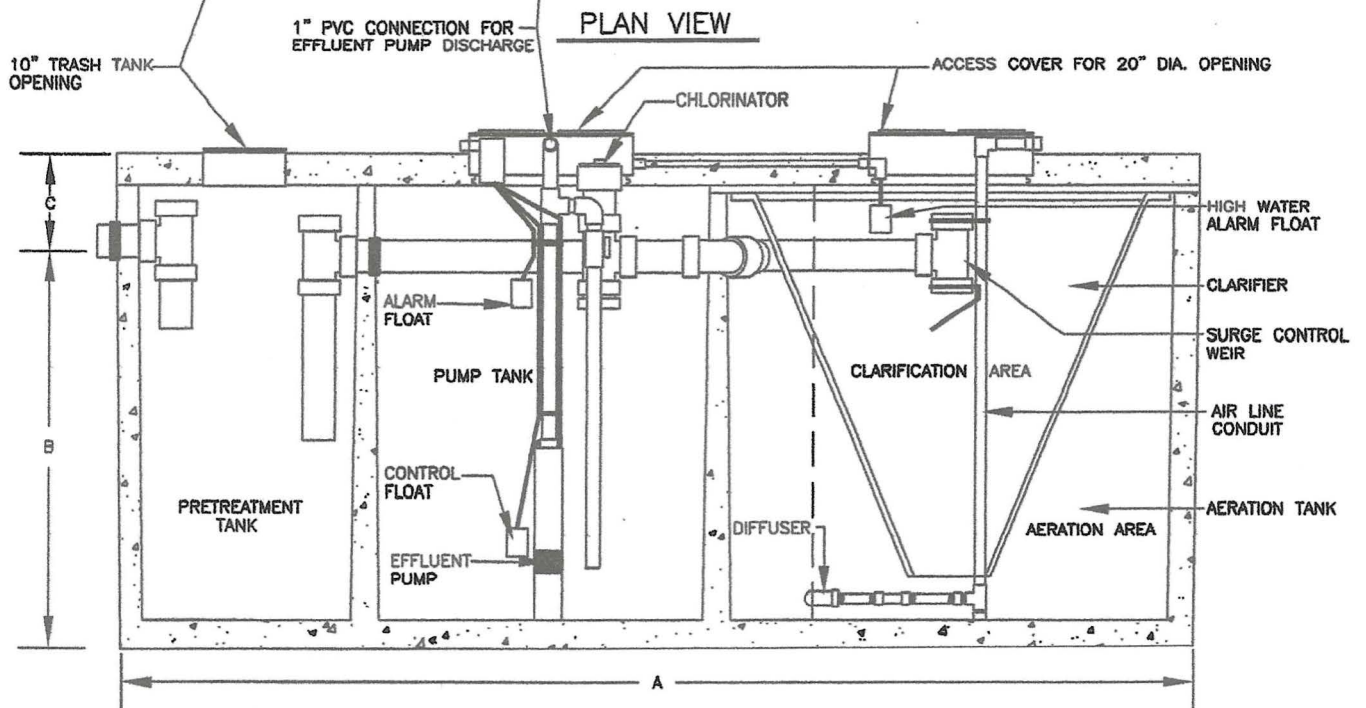
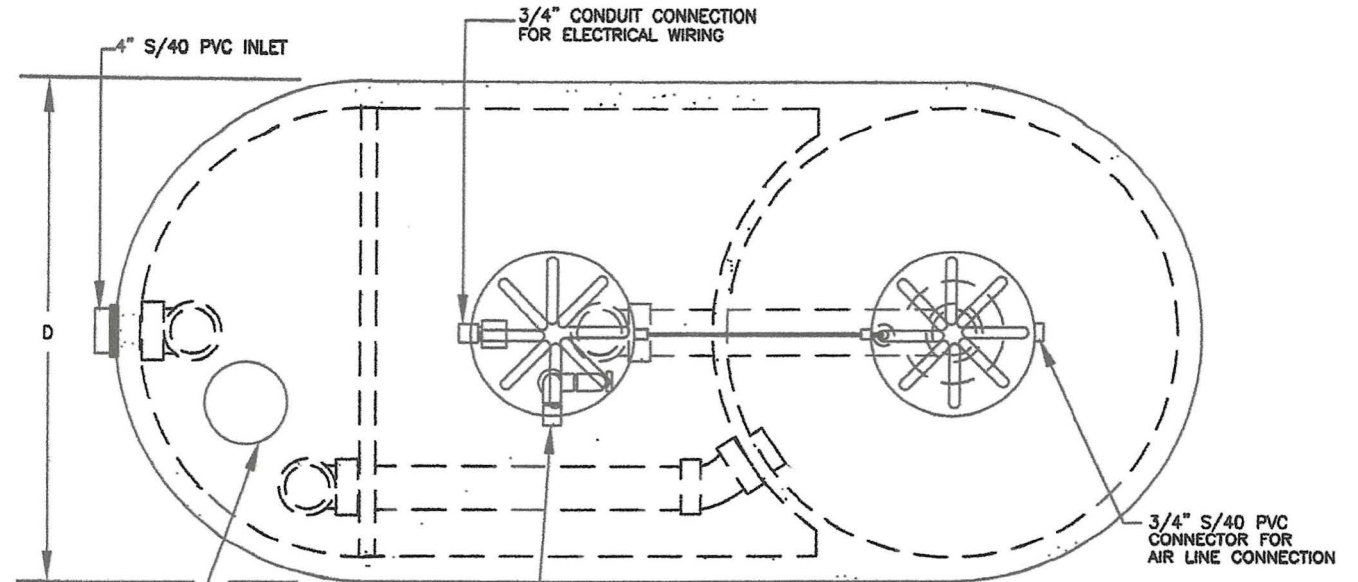
OSSF Design for Lake of the Hill Estates BLK22 LOT182
 aka 949 Cimarron Spring Branch TX 78070
 Angelica Sanchez



Higher Ratings LLC

0131 Alpine Trail
 SAN ANTONIO, TEXAS 78250
 TEL. 210-389-5225

DESIGN DRAWINGS



MODEL NC3 SECTION

DIMENSIONAL DATA

MODEL	A	B	C	D
500NC3-500	12'-2"	60"	12"	75"
500NC3-750	13'-5"	60"	12"	75"
600NC3	12'-7"	60"	12"	82"



TANK NOTES:

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

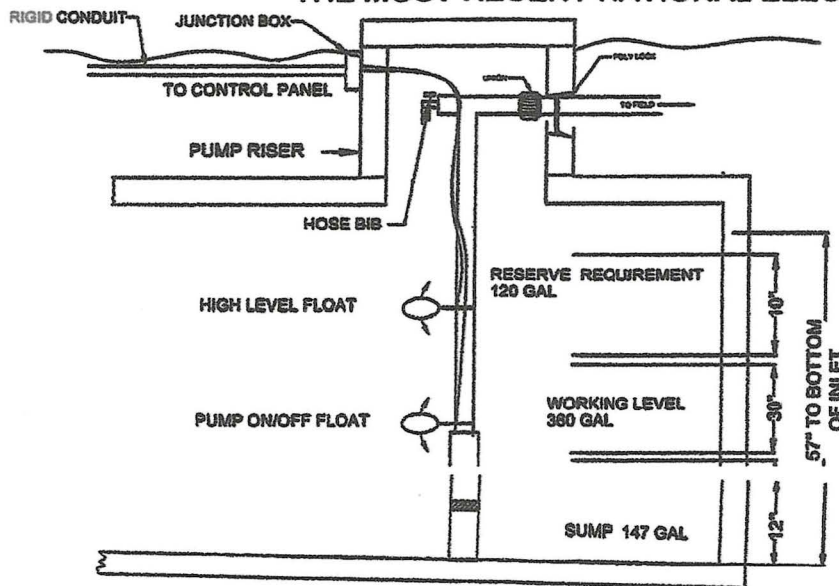
Tightlines to the tank shall be SCH-40 PVC.

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

Tanks must be left uncovered and full of water for inspection by the permitting authority.

ALL WIRING MUST BE IN COMPLIANCE WITH THE MOST RECENT NATIONAL ELECTRIC CODE



**TYPICAL PUMP TANK CONFIGURATION
CLEARSTREAM 600NC3T W/ 700 GAL PUMP**



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

	1" BSPT (male) 25.0 mm – nominal diameter 33.6 mm – pipe diameter (O D)	1" NPT (male)
Inlet/outlet diameter		
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

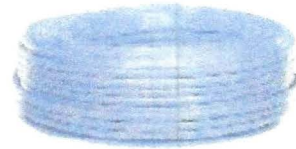
- Blue (400 micron / 40 mesh)
- Yellow (200 micron / 80 mesh)
- Red (130 micron / 120 mesh)
- Black (100 micron / 140 mesh)
- Green (55 micron)

Head Loss Chart

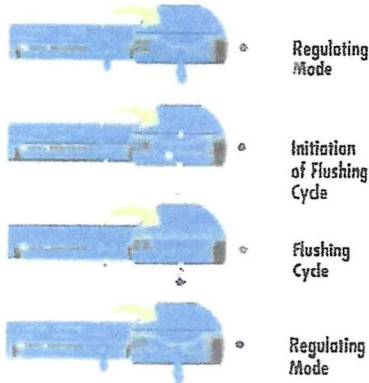




Bioline Dripperline



Pressure Compensating Dripperline 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, clog 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"

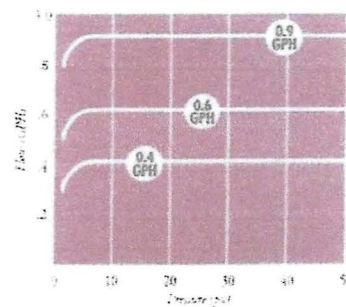
Recommended filtration: 120 mesh

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



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:

<i>Inlet</i>	<i>Outlet</i>
¾-inch Female National Pipe Thread (FNPT)	¾-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

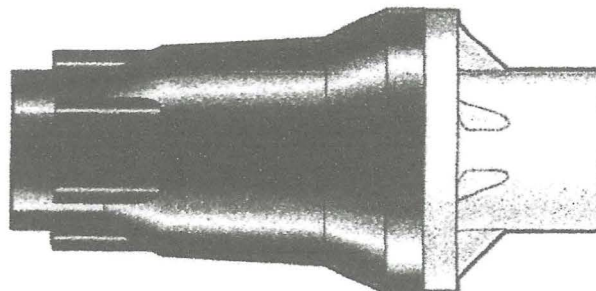
¾" FNPT x ¾" FNPT model (shown on right)

- 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 - 3834 L/hr)	6 PSI (0.41 bar)	80 psi (5.51 bar)
PMR-10 MF	4 - 16 GPM (909 - 3834 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)

Independence Title/GF# 2238201 -CLF/ RD

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

General Warranty Deed

Date: August 4, 2022 EFFECTIVE 8/8/2022.

Grantor: Ryan Phillip Rocco and Angela Marie Rocco, a married couple

Grantor's Mailing Address:

12136 W. HWY 90 Apt 11303
SAN ANTONIO, TX 78245

Grantee: Angelica Aguilar Sanchez, a Single person

Grantee's Mailing Address:

1206 COCHISE TRAIL
SAN ANTONIO, TX 78260

Consideration:

Cash and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged.

Property (including any improvements):

Lot 182, Block 22, LAKE OF THE HILLS ESTATES, situated in Comal County, according to the map or plat thereof, recorded in Volume 4, Page 70, Plat Records, Comal County, Texas.

Reservations from Conveyance: None

Exceptions to Conveyance and Warranty: Validly existing easements, rights-of-way, and prescriptive rights, whether of record or not; all presently recorded and validly existing

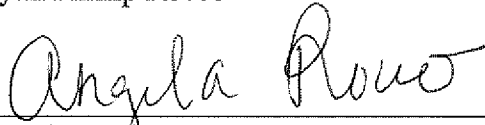
instruments, other than conveyances of the surface fee estate, that affect the Property; and taxes for 2022, which Grantee assumes and agrees to pay, but not subsequent assessments for that and prior years due to change in land usage, ownership, or both, the payment of which Grantor assumes.

Grantor, for the Consideration and subject to the Reservations from Conveyance and 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 it to Grantee and Grantee's heirs, successors, and assigns forever. Grantor binds Grantor and Grantor's heirs and successors to warrant and forever defend all and singular the Property to Grantee and Grantee's heirs, 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.



Ryan Phillip Rocco

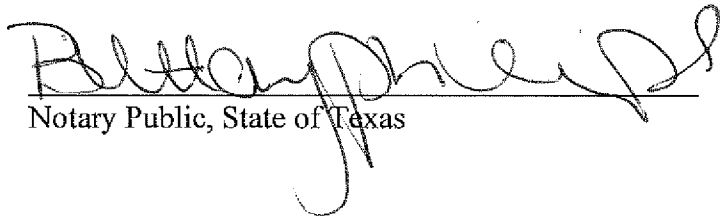
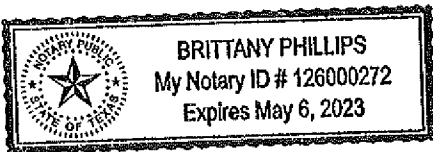


Angela Marie Rocco

STATE OF TEXAS)

COUNTY OF COMAL)

This instrument was acknowledged before me on August 4, 2022, by Ryan Phillip Rocco and Angela Marie Rocco.


Notary Public, State of Texas

PREPARED IN THE OFFICE OF:
STEVENS & MALONE, PLLC
P.O. Box 1744
Canyon Lake, Texas 78133
Tel: (830) 964-4442

Filed and Recorded
Official Public Records
Bobbie Koepf, County Clerk
Comal County, Texas
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