

Idaho Technical Guidance Committee

Meeting Agenda

Thursday, March 5, 2026

9:30 a.m. MST

Conference Room E

Department of Environmental Quality
1410 N Hilton St., Boise, ID

The meeting will also fully accommodate remote participation. Contact James Craft at james.craft@deq.idaho.gov to sign up for participation by telephone and web conferencing.

Call to Order and Roll Call

- Introduction of committee members, guests, and attendees

Public Comment Period – The Committee will allow up to 30 minutes for public comments on topics relevant to the Committee.

Action Item – Review, Amend, or Approve

- December 4, 2025 Draft TGC Meeting Minutes (**Appendix A**)
- Review and vote on final approval.

OLD BUSINESS

Action Item – Review, Amend, or Approve

TGM Section 4.5.3.1 Drip Distribution System - Basic Design Requirements (**Appendix B**)

- Add language specifying that drip distribution systems are afforded the same square footage reductions and vertical setback reductions as a PWTP or ETPS, per TGM Table 4-19 and Table 4-20.
- No public comments received.
- Vote on final approval.

Action Item – Review, Amend, or Approve

TGM Figure 2-8 Cutoff trench plan view (**Appendix C**)

- Revise Figure 2-8 to delete the 50-foot minimum separation distance depicted in the figure. The minimum separation distance from the drainfield to a cutoff trench is determined by Table 2-12 and varies from 9.5 feet to 120 feet.
- Revisit proposed edits.
- Vote on action

Action Item – Review, Amend, or Approve

Continue discussion from August 28, 2025, TGC meeting - PlanetCare Hybrid Coir Biofilter, presented by Andy (**Appendix D**)

- Review additional technical information from PlanetCare - design manual, sizing approach, proprietary components, media exchange and disposal requirements, and commercial use considerations.

- Determine appropriate classification and approval pathway - ETPS vs. proprietary system, service provider requirements, and compliance with Idaho design and discharge standards.
- Vote on action.

NEW BUSINESS

Note: There are no new products for TGC review for this meeting.

Action Item – Review, Amend, or Approve

2025 IDAPA 58.01.03 Updates – Tank Sizing and Piping Impacts

Discuss pre- vs. post-July 2025 rule changes affecting:

- 58.01.03.007.08.b Minimum Tank Capacities: average vs. maximum daily flow
- 58.01.03.007.20 Schedule 40 or stronger pipe and conflicts with commonly used ASTM 3034 pipe

Discussion Items

On-site Wastewater Program Update

- Hiring process update to fill Senior Onsite Wastewater Analyst 4 position
- Idaho by the Numbers (septic installer licenses, pumper licenses).
- OSCAR System Performance, Installation Challenges, and Design Considerations in Idaho

Action Item – Approve

Schedule Next Meeting (proposed: Thursday, June 11, 2026)

Action Item – Approve

Adjourn Meeting

**Begin time will be observed. Time spent discussing each agenda item may vary.*

Conference Call Instructions

All remote participants must join the Microsoft Teams conference call either by joining the meeting online or calling into the Teams phone number.

Call in number: 208-985-2810
Phone Conference ID: 724 034 105#

To reduce background noise, please remember to mute your phone unless you are speaking.

Teams Web Conference Instructions

This will allow users joining the meeting via online video conference to view the documents being shared.

For the Teams Meeting ID and Password, please contact James Craft at james.craft@deq.idaho.gov.

Appendix A

Technical Guidance Committee Meeting Minutes

Department of Environmental Quality
1410 N. Hilton St.
Boise, ID 83706

Thursday, December 4, 2025
9:30 a.m., MST
Conference Room C

The meeting accommodated remote participation via phone, Microsoft Office Teams conference, as well as in-person attendance.

TGC ATTENDEES:

Peter Adams, Onsite Wastewater Coordinator, TGC Chair – DEQ
Joe Canning, P.E. – Centurion Engineers
Kellye Johnson, Director of Environmental Health – EIPH
Mitch Kiester, Environmental Health Program Manager – SWDH
Jason Peppin, Environmental Health Program Manager, Ph.D. – REHS
Kendall Unruh, Complex Installer – WEB, Inc. dba/Western Septic & Excavation

GUESTS:

Brent Copes – Senior Environmental Health Specialist, Central District Health
James Craft – Wastewater Compliance Bureau Chief, DEQ
Erik Illum – Olson Engineering
Brent King – Lead Deputy Attorney General, DEQ
Jay Loveland – R.C. Worst
James Prickett – R.C. Worst
Kenny Skalla – Olson Engineering

CALL TO ORDER AND ROLL CALL:

The meeting was called to order at 9:30 a.m. Introductions were made by each person in attendance.

Public Comment Period: No comments were made.

APPENDIX A

Action Item – August 28, 2025, Draft TGC Meeting Minutes

- Review draft meeting minutes from August 28.
- Vote to approve the meeting minutes.
- The August 28 meeting minutes were approved.

Motion: Kellye Johnson

Second: Jason Peppin

Verbal Vote: Unanimously approved. The August 2025 meeting minutes will be posted to DEQ's website within 30 days.

OLD BUSINESS:

APPENDIX B

Action Item – Review, Amend, or Approve

Appendix C – Uncommon Flows

- Edit non-residential Row 8 to say “5 GPD/Walk-in Customer, 0.5 GPD/Drive-thru customer, 15 GPD/Employee.” Delete note about excluding drive-thru customers.
- No public comments received.
- No concerns were raised.
- Vote on final approval

Motion: Kellye Johnson

Second: Jason Peppin

Verbal Vote: Final vote, unanimously approved.

APPENDIX B

Action Item – Review, Amend, or Approve

Appendix C – Uncommon Flows

- Edit non-residential Row 12 to say “4 GPD/camping space, Using 1 GPD/person, 4 people per camping space.”
- No public comments received.
- No concerns were raised.
- Vote on final approval.

Motion: Joe Canning

Second: Kendall Unruh

Verbal Vote: Final vote, unanimously approved.

APPENDIX C

Action Item – Review, Amend, or Approve

TGM Section 2.2.4 – Effective Separation Distance to Surface Water

- Add language regarding spring surface water monitoring requirements.
- No public comments received.
- No concerns were raised.
- Vote on final approval.

Motion: Jason Peppin

Second: Mitch Kiester

Verbal Vote: Final vote, unanimously approved.

APPENDIX D

Action Item – Review, Amend, or Approve

New TGM Appendix E for Pumper Guidance Manual

- Add the pumper technical guidance manual as Appendix E of the TGM (Preliminarily approved to be a new Section 8, but may fit better as an appendix).
- Jason stated he appreciates the addition.
- Kendall has one concern regarding all the equipment being required to be on the truck.
- Peter said it would be a recommendation for the equipment and that it would not be a requirement.
- Kendall said the pumper technical guidance manual used to be in the Technical Guidance Manual, but at some point, it disappeared.
- Peter said that it disappeared before his time.
- No public comments were received.
- Vote on final approval.

Motion: Kendall Unruh

Second: Mitch Kiester

Verbal Vote: Final vote, unanimously approved.

APPENDIX E

Action Item – Review, Amend, or Approve

TGM Section 5.12 – Total Nitrogen Reduction Approvals

- Add drip distribution as a nitrogen-reducing system, under “public domain systems”.
- Suggest a 40% reduction, based on these articles:
 - 42%:

- <https://www.buzzardsbay.org/etistuff/results/costaenvccarticle2.pdf>
- 51%:
<https://www.sciencedirect.com/science/article/abs/pii/S0043135413010300>
- 50%:
<https://www.americanonsite.com/wpcontent/uploads/2022/12/Flyer-EPA-Chesapeake-Bay-Listed.pdf>
- 50%, PDF pages 17 and 22:
https://www.chesapeakebay.net/files/documents/osww_bmp_report_4-30-18.pdf
- 38%, PDF page 58:
https://d38c6ppuvigmp.cloudfront.net/documents/Final_OWTS_Expert_Panel_WQGIT_approved_07142014.pdf
- Erik Illum with R.C. Worst spoke and stated they reviewed the literature to understand how and why drip distribution is used as a nitrogen-reducing system. He stated that it works on a macro scale and on the micro level. It consumes all the oxygen, creates an anoxic environment, and then makes it an aerobic effluent. He said there's no one way that's guaranteed to get phosphorus out; however, according to the literature, 3 – 97% could be removed.
- Peter agreed and stated that phosphorus is not really discussed in the TGM, except in more complicated scenarios. Peter asked Erik if he could find literature that addresses the removal of phosphorus in systems, then he could add that to the next TGC meeting.
- Joe said he likes the addition, and years ago the TGC discussed drip system nitrogen removal, but it was never added to the TGM. Joe wants to know why the system doesn't require annual maintenance.
- Erik said that drip systems have been trending away from pre-treatment systems and moving toward drip systems. The new systems are incredibly resilient, even with little maintenance.
- Peter said they don't require a service provider for drip distribution; instead, they have a complex installer that comes out and services them, if needed.
- Joe asked for service providers for RGFs; if we need this, there's a difference there.
- Peter said that RGF and drip systems require engineers. Additionally, he said that we'll discuss more at the next TGC meeting about removing the service provider verbiage for RGFs.
- Jason suggested reviewing the minutes when the RGF was added to the TGM, to be equitable to ETPS systems. Additionally, he said he's fully supportive of the adding drip systems as nitrogen-reducing systems.
- Peter said that TGC doesn't require sampling of the systems in Idaho.
- Jason said, looking at seasonality during the growing season, that nitrogen reduction occurs due to plant uptake, and nitrification and denitrification occur. The literature Peter provided was helpful to see how different states do it.
- Erik asked if they could use the system now.

- Peter said that the drip distribution system may be used as a nitrogen-reducing system immediately. However, he said that they have not finalized granting reduced vertical separation distances to drip distribution systems. Peter is hopeful that it will be finalized in March 2026.
- No public comments were received other than Erik Illum's.
- Vote on final approval.

Motion: Jason Peppin

Second: Joe Canning

Verbal Vote: Final vote, unanimously approved.

APPENDIX F

Action Item – Review, Amend, or Approve

TGM Section 4.25 Seepage Pit

- Edited language (see appendix and below):
 1. Seepage pit disposal facilities may be used only for replacement systems on a case-by-case basis as a last resort if no other subsurface discharging alternatives are available. The district director will document all such cases.
 2. The site must meet the requirements of a standard system, except that it is not large enough in surface area.
 3. Seepage pits must meet all horizontal setback requirements in IDAPA 58.01.03.007 and IDAPA 58.01.03.008.
 4. Pit bottom must be no deeper than 18 feet below the natural ground surface. The bottom of the pit must conform to the effective soil depth chart (IDAPA 58.01.03.008.01.c). *The top of the pit may be more than 4 feet below ground surface.*
 5. Seepage pits may not be installed in design group C soils.
 6. A test hole must be excavated to a depth of 6 feet below the proposed termination of the bottom of the seepage pit prior to permit issuance.
- Peter thinks this will be helpful for all the districts.
- No concerns were raised.
- No public comments were received.
- Vote on final approval.

Motion: Jason Peppin

Second: Kellye Johnson

Verbal Vote: Final vote, unanimously approved.

NEW BUSINESS:

APPENDIX G

Action Item – Review, Amend, or Approve

TGM Section 4.5.3.1 Drip Distribution System - Basic Design Requirements

- Add language specifying that drip distribution systems are afforded the same square footage reductions and vertical setback reductions as a PWTP or ETPS, per TGM Table 4-19, and Table 4-20.
- Jason said it would be helpful to have criteria to assess this regarding soil depth reduction.
- Joe said he agrees with Jason. He wonders what the logic is for the application.
- Jason said there was a set of criteria according to the literature regarding loading. Additionally, he wants to know what the criteria would be.
- Joe said that if we did pretreatment before it would provide reductions.
- Peter said it warrants vertical reduction, and there's not a lot about surface area reductions. Additionally, he said it could be changed to just allowing a vertical setback, and that it could apply in the TGM, section 4.19, and possibly for table 4-20.
- Joe asked how we chase that down for NSF 40 testing.
- Erik said reducing the total nitrogen that the BOD comes into it, and that increases the application rate in Table 4-20. He also said that essentially, it would go up one treatment group.
- Peter said he will look into it drip systems effect on BOD and TSS further.
- Jason agrees, it needs to be evidence and data-based to ensure that a reduced square footage for drip systems would not overload the systems. Additionally, he said that a lot of the systems are installed where space is limited.
- Kendall agrees that if we take away pre-treatment and no monitoring, we have to get it right. Additionally, he said that it might be a good compromise where we don't require a service provider.
- Jason agrees it needs further research.
- Peter will research and bring it to the next TGC meeting to determine if the added language is necessary.
- Jason asked if Erik or Kenny had come across any literature stating that it reduces the clogging of the emitters.
- Erik said he hasn't come across anything for the TSS, nothing specific for BOD reduction either. Additionally, he said he would research it further as well.
- Peter said it would be posted for public comment.
- Vote on preliminary approval with edits.

Motion: Joe Canning

Second: Kellye Johnson

Verbal Vote: Preliminary vote with edits, unanimously approved.

APPENDIX H

Action Item – Review, Amend, or Approve

TGM Figure 2-8 Cutoff trench plan view

- Revise Figure 2-8 to delete the 50-foot minimum separation distance depicted in the figure. The minimum separation distance from the drainfield to a cutoff trench is determined by Table 2-12 and varies from 9.5 feet to 120 feet.
- Jason appreciates the edit, and it has created confusion in the past.
- Peter said it will be posted for public comment.
- Vote on preliminary approval.

Motion: Joe Canning

Second: Jason Peppin

Verbal Vote: Preliminary vote, unanimously approved.

Action Item – Review, Amend, or Approve

TGM Section 5.13 Approved PWTPs (No appendix)

- In the past, the TGC required that all PWTPs have a minimum of 12 inches of sand beneath the product, regardless of whether it was NSF-40 tested with less sand.
- Formally agree that if a PWTP was NSF tested with 6 inches of sand beneath the product, the PWTP may be installed with 6 inches of sand.
- Approval has already been granted to Eljen and Infiltrator, but providing individual approval to manufacturers is not necessarily going forward.
- No edits to the TGM; this agenda item is intended to document the TGC's position on the matter.
- Jason said he wanted to make sure that we aren't looking at conflicting manuals and suggested updating the manual to reflect this, notifying the health districts once the updates are made, and sending out an approved manual as well.
- Peter said he asked Eljen and Infiltrator to update their manuals.
- Jason said most tested at 6 inches to pass the NSF 40 testing.
- Kendall said we are saying that we approve the proprietary systems based on the NSF 40 testing. He asked if they get approved at 12 inches, it would be approved, and if it's tested at 6 inches, it would be approved.
- Vote on final approval.

Motion: Peter Adams

Second: Kellye Johnson

Verbal Vote: Final vote, unanimously approved.

DISCUSSION ITEM(S):

ADDITIONAL ACTION ITEMS OR COMMENTS:

On-site Wastewater Program Update:

- Kendall said that we need to address water softeners because it's in the EPA guidelines that we shouldn't discharge water softeners to septic systems, and it's starting to be noted on the permits. Additionally, he said that once the system is a proprietary system, the system can get gunked up very easily. He also said that salt increases the specific gravity of water, creates less separation, more separated solids, and a change in the pH. He said he feels like it should be addressed somehow and that it should be increased.
- Jason said it's something that they have seen as well; it can be due to a volume issue, in terms of increasing tank size. Additionally, he said that in their district, they try to educate as much as possible and consult with IDWR for the filter back-flushing. He said that the information IDWR provides is very helpful and filtration-specific.
- Peter agrees and said that we shouldn't be overstepping, and referring them to IDWR is appropriate.
- Kendall said that maybe it's an education campaign that needs to occur with the contractors. Additionally, he said there needs to be more planning ahead of time, and that they need to work with the counties before installing systems where water softeners are also installed.
- Erik asked if it would be helpful to put it on the application.
- Peter said it would be a good addition to the application.
- Kendall suggested adding a checkbox with specific language regarding water softeners. He said the language could include something to the effect of "*the recommendation for garbage disposals is to pump the tank more often*".
- Jason agrees.
- Peter said that it might be good to replace the language on the application with a water softener instead of a garbage disposal, and to list that there is a need to pump the tank more often. Additionally, he said that he would look into getting the application changed.
- Jason stated that the health district SOP document is up for review this year, so it is a good time to make changes to the application.

Action Item – Motion to schedule the next meeting

- The proposal for the next meeting is slated for Thursday, March 5, 2026.

Motion: Peter Adams

Second: Joe Canning

Verbal Vote: Unanimously approved.

Action Item – Motion to adjourn the meeting

Motion: Kendall Unruh

Second: Joe Canning

Verbal Vote: Unanimously approved, and the meeting was adjourned at 10:40 a.m.

DRAFT

Appendix B

4.5.3.1 Basic Design Requirements

The following minimum design elements apply to both septic tank and pretreated effluent systems and continuous and noncontinuous flush drip distribution systems:

1. Drip distribution tubes are placed directly in approved native soil at a depth of 6–18 inches with a minimum final cover of 12 inches.
 - a. Cobbles may be removed from the native soil without it being considered disturbed.
2. Drip distribution tubes should be placed on contour and slightly for proper drainage to the manifold and ultimately the dose tank. If the dosing tank is installed above the drainfield, the distribution tubes should be sloped toward the drip tubing for drainage out into the drainfield.
 - a. Drip tubing is made of low-density, linear polyethylene to withstand the effects of cold weather. These properties of the drip tubing allow drainage of effluent from drip tubing. Therefore it is the hard/rigid components of the drainfield that must be protected from freezing.
3. A minimum of two zones are recommended, but not required, regardless of system size, and zones should be kept as small as is reasonable.
 - a. Individual lateral lengths should be designed to provide equal discharge volumes across the lateral emitters (lateral length is calculated from the connection point on the supply line to the connection point on the return line).
 - b. Lateral lengths may differ within a zone as long as the minimum flushing velocity can be maintained at the terminal end of each lateral.
 - c. Zones within a system should be close to equal in size to achieve efficient and consistent application of wastewater.
 - d. In lower permeability soils (i.e., clayey soils), it is recommended that drip tubing and emitter spacing be reduced while maintaining the minimum square footage to increase the emission points and maintaining the dosing volume to decrease wastewater travel distance through the soil.
4. The design application rate is based on the most restrictive soil type encountered within the minimum effective depth of soil below the drip distribution tubing required to meet the necessary separation distance to limiting layers. The effluent may be discharged to a drainfield satisfying the vertical setback requirements identified in Table 4-19.

Appendix C

Cut Off Trench Detail

Diversion Swale (Run-on Control)

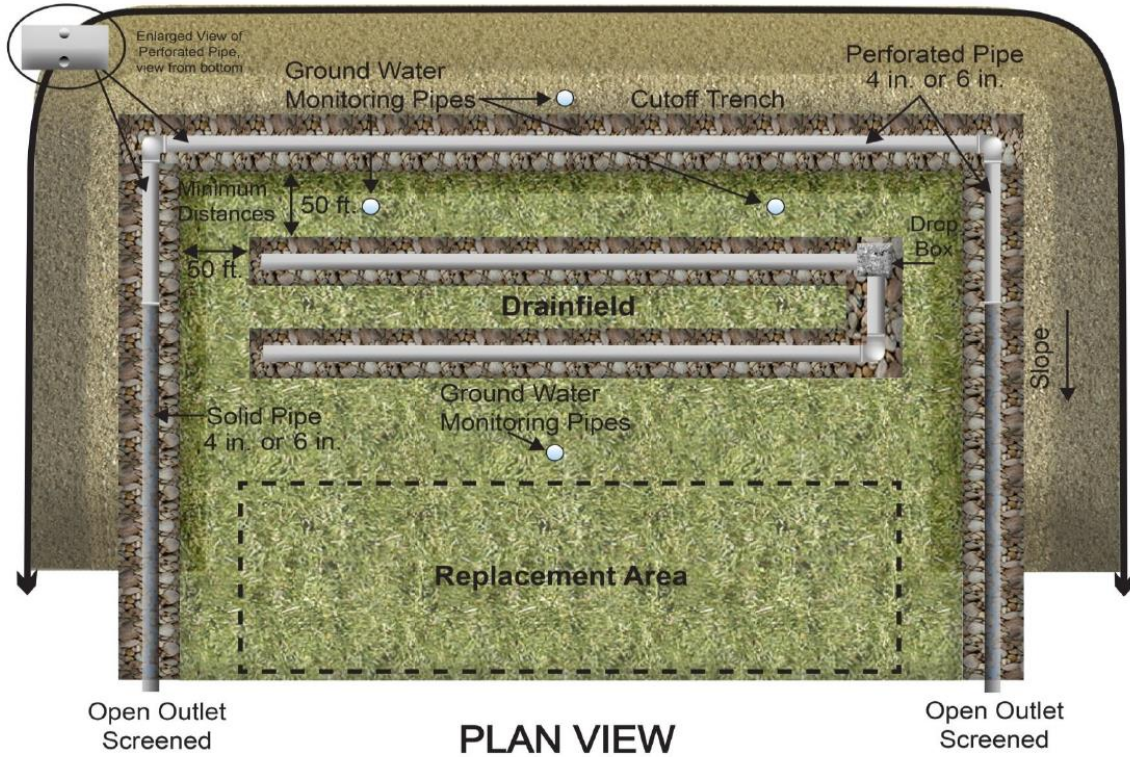


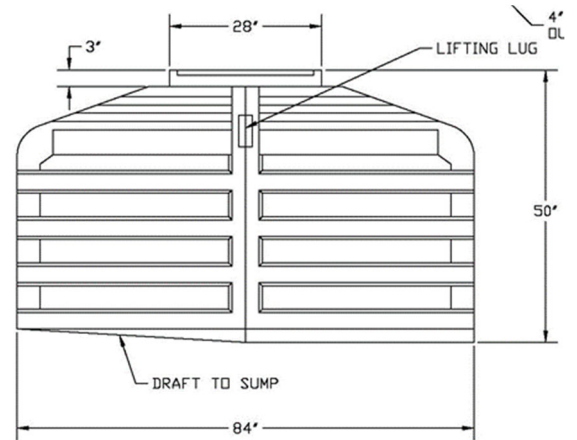
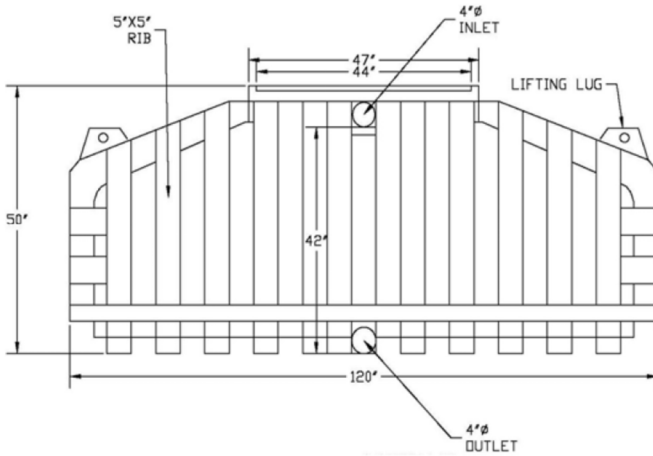
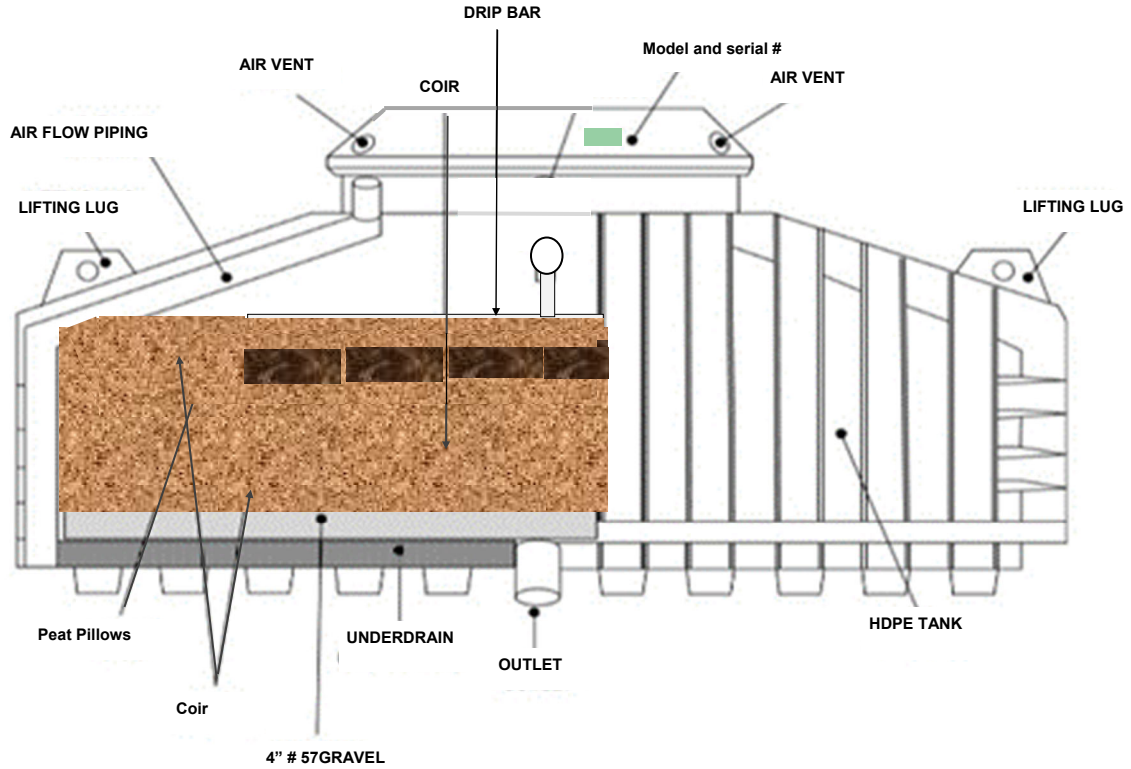
Figure 2-8. Cutoff trench plan view.

Table 2-12. Setbacks of drainfield from cutoff trench based on percent slope.

Slope (%)	Depth of Cutoff Trench (feet)							
	3	4	5	6	7	8	9	10
5	0.5 - 3 50	1.5 - 4 50	2.5 - 4 50	3.5 - 4 50	4 61	4 81.5	4 100	4 120
10	0 - 3 30.5	0 - 4 40.5	0 - 4 50	1 - 4 50	2 - 4 50	3 - 4 50	4 50	4 61
15	0 - 3 18	0 - 4 25	0 - 4 32	0 - 4 39	0 - 4 45	0.5 - 4 50	1.5 - 4 50	2.5 - 4 50
20	0 - 3 14	0 - 4 19.5	0 - 4 24.5	0 - 4 29.5	0 - 4 34.5	0 - 4 39.5	0 - 4 44.5	0 - 4 50
25	0 - 3 11.5	0 - 4 16	0 - 4 19.5	0 - 4 23.5	0 - 4 27.5	0 - 4 31.5	0 - 4 35	0 - 4 39.5
30-45	0 - 3 9.5	0 - 4 13	0 - 4 16.5	0 - 4 19.5	0 - 4 23	0 - 4 26.5	0 - 4 30	0 - 4 33

Note: Split cells show drainfield installation depth requirements in the upper left and minimum setback distance in the lower right.

Appendix D



Square footage for Coir/ Peat Filter bed surface area

$118.25" \times 83.75" = 9,903.4375 / 144 = 68.77 \text{ sq ft}$

Cubic feet for Coir/Peat Filter

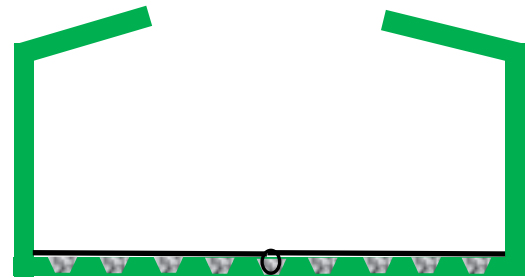
$31" / 12 = 2.58 \text{ ft} \quad \text{---} \quad 2.58 \text{ ft} \times 68.77 \text{ sf} = 177.42 \text{ cf}$

Coir peat volume in Waco HDPE coir/peat tank 173.4

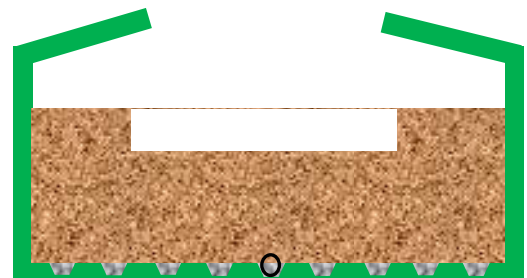
Underdrain Depth	4"
Peat Filter Depth	31"
Air Gap / top of filter to bottom of the	7"
Outlet invert to Inlet invert height	42"
Minimum coir/peat depth	30 inches



Check all corrugated pipes in the tank floor for holes down—all other pipe is solid- Check that all connectors are good. Place 4 inches of #57 non reactive washed septic stone in the bottom of the tank. The top of the pipe will be visible.



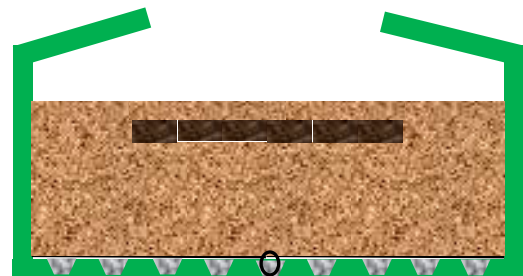
Set aside the peat pillows in each sack and fill the tank with all the coir sacks - The number of pillows in each super sack is marked in a circle on each sack - Channel out a trough for the pillows in the center of the tank opening



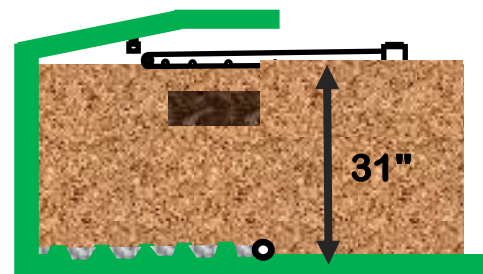
Place the 6 pillows (C/PBF450) level under the drip bar location



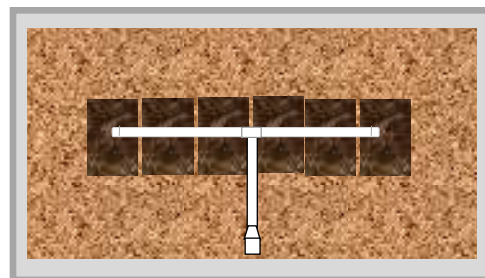
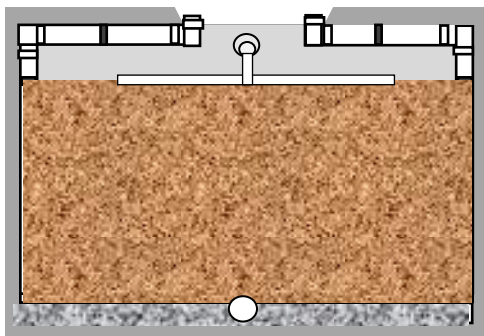
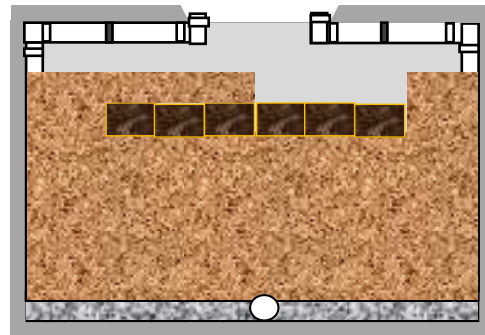
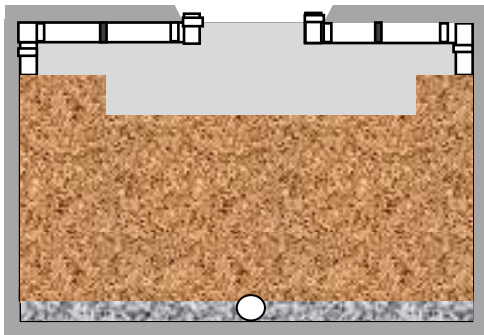
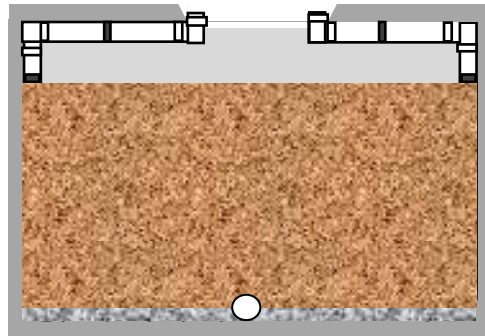
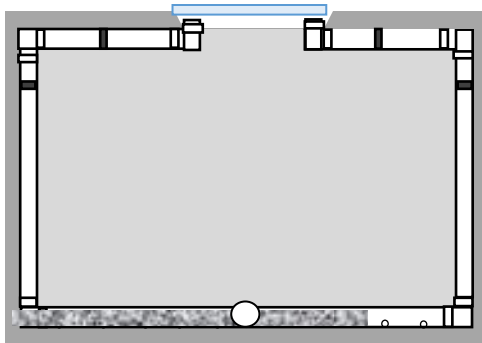
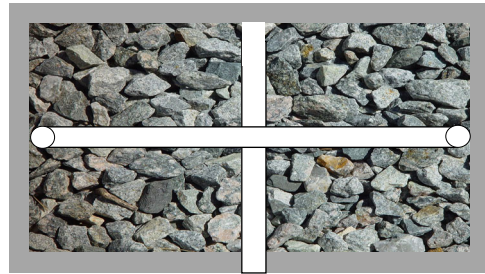
Cover the pillows and level the coir filter bed. Attach the drip bar and level. Tighten the 2" union. Recheck level.



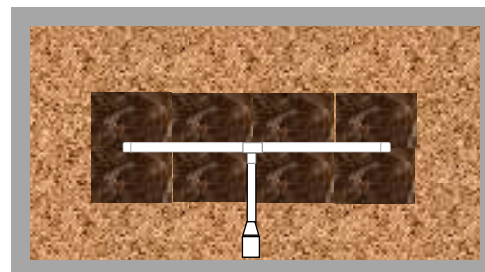
The coir should be ~ 31 inches in depth - it is ok to partially cover the drip bar. It is normal for some settling to occur during the first 6 months. No coir will need to be added during the normal life span of the Coir/Peat biofilter. Expected service life of the Coir is 12– 14 years under normal usage and loading.



Place and glue 1500 lb crush 4" perforated pipe holes down on the floor of the tank using the provided 4" cross - Place and glue ell and solid pipe upright pvc - strap to the tank wall near the top. Dry fit 90° ell and pipe for the horizontal run at the top of the tank. Dry fit the drip bar in the center of the tank. Drill the holes in the insulation cover and line up with the 4" air exchange pipe. Glue and strap the pipe. Pull the peat pillows from the super sacks and empty all of the coir into the tank— level and create a trough for the peat pillows and 6-8 inches of cover.



Place peat pillows under the drip bar location as shown - two rows may be needed as pillow count will vary by model - cover with coir to a minimum depth of 6 inches and a maximum depth 10 inches on larger units Install drip bar in the center of the tank and level with a torpedo level.





Planet Care Biofilters



Wastewater Treatment

Operation and Maintenance Guide for Planet Care FXC/PBF Series Biofilters

Before you service the unit

Call the customer a day or two before service to inform them the date and the approximate time you will be there. Only state approved or licensed service providers that have successfully completed the Planet Care Coir/Peat Biofilter series training are authorized to service the Planet Care Biofilters..

USING THE Planet Care Biofilter FXC/PBF series

The Minimum number of services required by Planet Care Inc. is 1 per year. The biofilter and frequency of maintenance of the Planet Care Biofilter depends on what the customer puts in their system. Residential applications require maintenance as long as the unit is in service.

Do NOT allow the following in any Planet Care Biofilter:

Backflush from a water softener - Floor drains or foundation drains - Ground or surface water
 Fats, Oils and Grease (FOG) from any source - Paints or solvents, pesticide products, any toxic substances
 RV chemicals, prescription medications - septic tank or septic system additives of any type
 Excessive or frequent bleach use or strong disinfectants lye, pine oil or any oil based cleaners
 Petroleum products or any non-biodegradable substances - Strong or line cleaning acids
 Disposable paper products such as rubber or plastics paper towels, diapers, tampons, condoms, sanitary napkins

The Planet Care Biofilter is a passive, all natural coir/peat filter bed. There is no activated sludge produced in this treatment process. The septic tank is the only portion of this treatment process that produces and routinely requires the removal of accumulated sludge. If any sludge or grease is found on the coir/peat filter bed it can be removed with a shovel or similar tool. If any sludge is found on the coir/peat bed the septic tank and the outlet filter should be checked. If dirt is present on the filter bed check for ground and or surface water leaks. Biomat may form on top of the coir/peat filter. This is normal and will vary based on waste strength from the tank. A proper service will break up any biomat and is mixed into the filter bed with a rake during the raking and turning of the loose peat moss.

There is only regular maintenance of the Planet Care Biofilter and replacement of the coir/peat when the filter has reached its service life. Please refer to the owners guide for the biofilter model number. It is also molded into the biofilter cover to order so the correct replacement kit is ordered.

Be sure to fill out and submit a Maintenance Report. Leave a copy with the homeowner, one to Planet Care Inc. and one to the local Health Department. This a required compliance and should be filed within 10 business days. If any repairs or service can not be done during this visit you should notify the customer on the estimated time and cost of the repair. Your local distributor will carry most replacement parts.

Planet Care Biofilter • 2480 Berkshire PKWY Ste B • Clive, Iowa • 50325
 contact@planetcarebiofilters.com • planetcarebiofilters.com

Planet Care Biofilters



Wastewater Treatment

Operation and Maintenance for the FXC/PBF Series Biofilters

1. If using a dosing pump to dose the Planet Care module/s disconnect power.
2. Loosen the stainless steel screws and remove the green cover on the module.
This will expose the white insulation cover.
3. Remove the insulation cover that sits upon support pipes and carefully set aside.
4. Loosen and the 2" pvc union and remove the drip bar assembly.
5. Rinse and flush the inlet pipe and drip bar with fresh water. Visually inspect the filter bed for grease and or oily substances that should not be present.
6. Rake and turn the coir chips with a long , ~ 4 – 5", tine rake to break up any bio-mat, if present. The coir chips should be turned over completely down to the peat pillows unless the coir chips appear clean. A short handled rake or fork with 4 inch or longer tines.
7. Re-level the entire coir chip bed completely.
8. Rinse the inlet assembly into the septic tank and reattach the 2" union. Level the 2" drip bar with a bubble level and tighten 2" union. Recheck level.
9. Flush all air exchange and discharge pipes between the sample port and the coir/peat tank with clean water.
10. Inspect effluent. Effluent should be odor free. It may have a tea color for the first year of service is due to coir-peat "washing" and is completely normal with a slight to clear color thereafter.
11. If sampling is required grab an effluent sample from the sampling port or the closest point downstream of the Biofilter. Using a clean jar capture a sample. Place the lid on the jar and place in a cooler with ice and take immediately to the lab. Document the procedure .
12. Examine tank area for any unusual settling and any signs of water infiltration. Make sure that all surface and runoff water is diverted away from system. Replace all lids and secure as per manufacture's requirements.
13. Maintenance Completion. Examine drainfield area for any unusual settling or wet spots. Verify that trees and shrubs have not been planted on or near the Planet Care tanks or module/s or drainfields. Make sure power is reconnected if this is a pumped system. Fill out the maintenance form noting any problems or corrections done during the service visit. Send copies to Planet Care, the owner and Health Department as required by code

Troubleshooting the coir/peat system

A coir/peat treatment system is a Living Ecosystem filter. Like any filter it can become clogged with time and usage. A average life is 12 or more years when operated as per the homeowner manual and serviced regularly. Since the entire treatment of the wastewater is the Living Biofilter correct installation procedures, routine maintenance and the customer following the owners manual will keep the system functioning correctly. Check the septic tank to see if it appears normal. A septic tank that is not operating properly, leaking, not pumped, chemical sheens or lack of regular service may cause the biofilter to bind or fill up. Septic tank solids from a missing septic tank outlet filter can contribute to the binding. If the treatment system is slow perking as demonstrated by water standing on the coir/peat surface longer than a minute indicates it may be time to rake the top loose layer of coir. Check the condition of the peat pillows and replace if mushy. This does not normally occur. A garbage disposal creates many fine solids in the grinding of the waste scraps will shorten the normal life of the coir/peat and require more frequent pumping of the septic tank. Ground and surface water infiltration in any portion of the treatment system will carry fine soil that will prematurely clog the filter. If binding of the bed occurs through normal usage and servicing, finding the cause of the binding is the key to preventing reoccurrence. In cold climates good drainage around the unit, adequate cover and or insulation may be required to prevent freezing, especially on north facing sites or if the unit has not been serviced regularly. By raking the coir down to a the top layer of pillows will show how deep the restrictive layer is. Remove and replace the peat pillows and any grease or oil covered coir. If the binding is uniformly found throughout the whole top layer replacement may be required. Biomats formation is normal and may be raked and mixed back into the top layer of coir. The removal of the top layer is typically done by a snow shovel or similar tool. Rake all coir to the center opening as the clogged coir is removed. The removed coir/peat if clogged by chemicals must be disposed according to state code, typically in a landfill. Coir/peat that has reached its service life by normal operations or soil infiltration once removed should be placed in a safe area to drain and may be lightly sprinkled with lime or on a truck or trailer with a tarp to prevent effluent leaks and hauled to the disposal site. Several days of direct sunlight with turning the material or spreading thinly will make the material safe for mixing into the soil where allowed by code.

Replacement of the peat

Replacement of the coir/peat is needed when the filter bed becomes mushy and or fails a performance test. To replace the coir/peat : Pumping the septic tank and then the coir/peat filter bed is recommended. Use a long tooth rake pull the few peat pillows out and set on a tarp or the transport vehicle. Remove the remaining loose coir with a heavy vacuum truck or shovel if OSHA guidelines can be followed. Flush the underdrain with clean water till it runs clear. Follow the install manual for the coir/peat placement procedures Close the unit up as per the install manual. The unit may be returned to service. Dispose of the coir/peat by state code. If no code is in place put the pillows in direct sunlight for a day. They may be sprinkled with lime on the top of each pillow. After a few days in direct sunlight till into the soil, unless prohibited by state code. Dispose of the coir/peat at a landfill when state code does not allow tilling back in to the soil. The landfill operator should be able to incorporate the coir/peat into the soil capping the landfill to help establish a natural cover. Only Planet Care coir/peat material may be used as a replacement.



Planet Care

BIOFILTERS

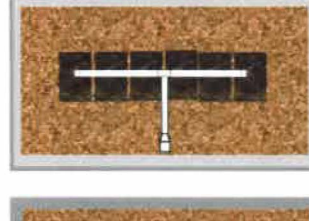
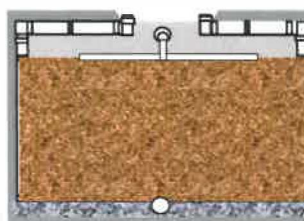
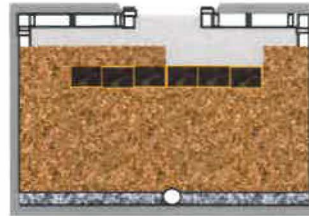
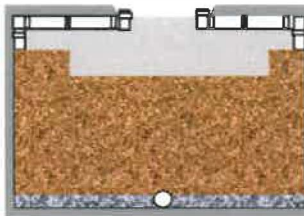
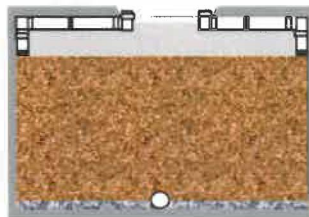
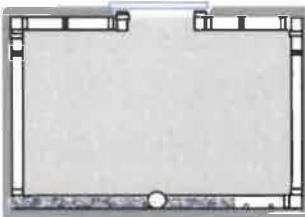
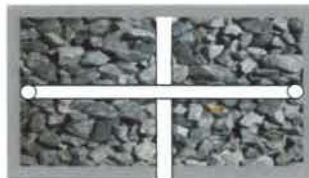
Coir Peat Biofilter, Easy Assembly, Easy Maintenance



COIR/PEAT BIOFILTER

Concrete Tank
PBFC 450-600 - 750-900 GPD

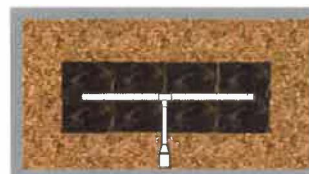
Service residential and commercial applications up to 900 gallons per day per unit.



- Passive System:
- No electricity needed
 - No moving parts
 - No dosing pumps needed

Ease of Installation
Ease of Maintenance
Low cost of Maintenance
5-year warranty

Place peat pillows under the drip bar location as shown – two rows may be needed as pillow count will vary by model – cover with coir to a minimum depth of 12 inches. Install drip bar in the center of the tank with union and straps then level with a torpedo level.



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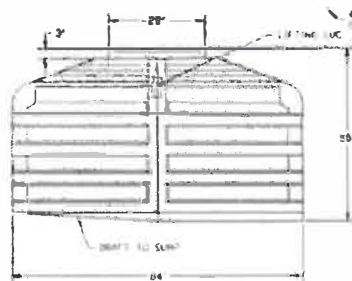
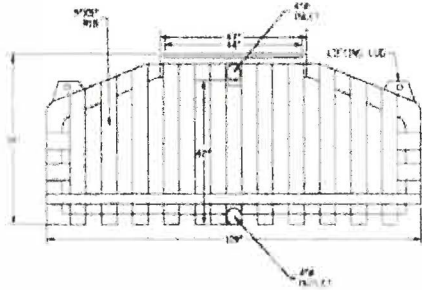
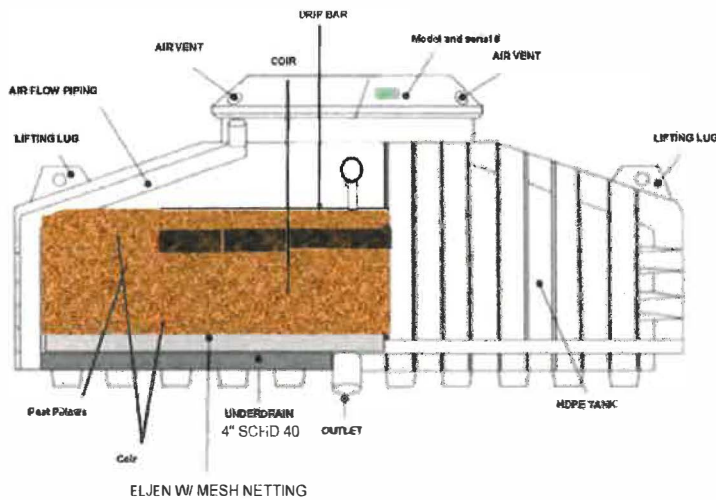
BIOFILTERS

Coir Peat Biofilter, Easy Assembly, Easy Maintenance

ASSEMBLY COIR/PEAT BIOFILTER

Poly Tank
PBF450

Planet Care Biofilters



Square footage for Coir/ Peat Filter bed surface area

$$118.25' \times 83.75' = 9,903.4375 / 144 = 68.77 \text{ sq ft}$$

Cubic feet for Coir/Peat Filter

$$31' / 12 = 2.58 \text{ ft} \quad 2.58 \text{ ft} \times 68.77 \text{ sf} = 177.42 \text{ cf}$$

Coir peat volume in Waco HDPE coir/peat tank 173.4

Under drain Depth	4
Peat Filter Depth	31"
Air Cap / top of filter to bottom of the	7"
Outlet invert to Inlet invert height	42"
Minimum coir/peat depth	30 inches

Service residential applications up to 450 gallons per day per unit.

Passive System:

- No electricity needed
- No moving parts
- No dosing pumps needed

Ease of Installation
Ease of Maintenance
Low cost of Maintenance
5-year warranty



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OFFICIAL LISTING

NSF certifies that the products appearing on this Listing conform to the requirements of
NSF/ANSI 40 - Residential Wastewater Treatment Systems

This is the Official Listing recorded on May 27, 2020.

Planet Care Inc.
4102 Bob White Boulevard
Pulaski, VA 24301
540-980-2420

Facility: Pulaski, VA

Model Number	Rated Capacity Gallons/Day	Classification
Coco/peat Biofilter Series -Concrete ^[1]		
FXC/PBFC450 - 3 BEDROOM TREATMENT SYSTEM	450	Class I
FXC/PBFC600 - 4BEDROOM TREATMENT SYSTEM	600	Class I
FXC/PBFC750 - 5 BEDROOM TREATMENT SYSTEM	750	Class I
FXC/PBFC900 - 6 BEDROOM TREATMENT SYSTEM	900	Class I
Planet Care Coir/Peat Biofilter - Poly		
FXC/PBF 450 - 3 BEDROOM TREATMENT SYSTEM	450	Class I

[1] Suffix C denotes concrete tank.

Note: Additions shall not be made to this document without prior evaluation and acceptance by NSF.

1 of 1