



**Welcome to the Technical Guidance Committee (TGC)
Meeting
September 10, 2026
9:30 a.m. (MST)**

**If using your computer audio is not an option, please
call the Teams call-in number instead.**

**Teams call-in phone number: (208) 985-2810
Password: 738 229 690#**

**Please mute your microphone/phone if you are not
speaking.**

Thank you

Idaho Technical Guidance Committee (TGC)

Meeting Agenda

Idaho Department of Environmental Quality

1410 N Hilton St., Boise, ID 83706

Conference Room: C

September 10, 2026

9:30 a.m. (MST)

The meeting will also fully accommodate remote participation. Contact Jayson Foley at Jayson.Foley@deq.idaho.gov to sign up for participation by telephone and/or web conferencing.

Call to Order and Roll Call

- The meeting will be called to order at 9:30 a.m. (MST), and introductions will be made by each person in attendance.
- TGC Attendees:
 - TBD
- Guests:
 - TBD

Public Comment Period

- The Committee will allow up to 30 minutes for public comments on topics relevant to the Committee.

Action Item 1 – Meeting Minutes – Appendix A

- TGC review and vote on final approval of the June 11, 2026 Meeting Minutes draft.

Product Review

- There are product presentations being provided by manufacturers for TGC review under the New Business section of this meeting.

Old Business

Discussion Item 1 – PlanetCare Hybrid Coir Biofilter

- Status update on the manufacturer's Idaho-specific submittal and DEQ review.
- Determine whether additional manufacturer information or future TGC consideration is needed.

New Business

Discussion Item 2 – Appendix B – Omega Onsite Processing

- Omega Liquid Waste Solutions will present its complete pump-out, 100-micron mechanical filtration, same-source wastewater return, and off-site solids-disposal process.
- Provide technical input to DEQ regarding whether the practice can be accommodated under existing Idaho pumper licensing, equipment, recordkeeping, spill-prevention, and disposal requirements.

Discussion Item (Tentative) 3 – Appendix C – BioMicrobics BioBarrier HSMBR Approval Framework

- BioMicrobics will present its proposed HSMBR 1.5 through 9.0 models and corresponding nitrogen-reduction variants for domestic and high-strength commercial wastewater applications.
- Discuss applicable approval pathways, third-party performance verification, proportional equivalency and scaling, and a defined engineered design envelope.
- No presentation was provided to DEQ prior to the drafting of the TGC agenda.

On-site Wastewater Program Updates

- DEQ Memorandum – Implementation of the Revised Gray Water Definition – Signed July 29th.
- DEQ Memorandum – Septic Tank Capacity by Structure and Alternative Piping Material Approval memorandum – DA review.
- OSCAR-II and OSCAR-XO2 revised manuals – revision necessary.
- TGM Figure 2-8 correction, limited republication, and comprehensive TGM formatting and structural overhaul status.
- TGC Interpretation and Guidance Tracker

Action Item 2 – Motion to Schedule the Next Meeting

- The proposed date for the next meeting is Thursday, December 10, 2026.

Action Item 3 – Motion to Adjourn the Meeting

Note: The meeting will begin at the scheduled time, and 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 the Teams phone number.

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

Teams call-in phone number: (208) 985-2810

Phone Conference Password: 738 229 690#

Teams Web Conference Instructions

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

For the Teams Meeting ID and password, please contact Jayson Foley at jayson.foley@deq.idaho.gov.

Appendix A

Technical Guidance Committee (TGC) Meeting Minutes

Department of Environmental Quality

1410 N. Hilton St., Boise, ID 83706

Conference Room D

Thursday, June 11, 2026

9:30 a.m., MST

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

Call to Order and Roll Call

The meeting was called to order at 9:30 a.m. (MST), and introductions were made by each person in attendance.

- **TGC Attendees:**

- Joe Canning, P.E. – Centurion Engineers
- Jayson Foley – Senior Onsite Wastewater Analyst, DEQ
- Kellye Johnson, Director of Environmental Health – EIPH
- Mitch Kiester, Environmental Health Program Manager – SWDH
- Jason Peppin, Ph.D., REHS – Environmental Health Program Manager,
- Kendall Unruh, Complex Installer – WEB, Inc. d/b/a Western Septic & Excavation

- **Guests:**

- James Craft – Wastewater Compliance Bureau Chief, DEQ
- Erik Illum – Olson Engineering
- James Prickett – R.C. Worst
- Kenny Skalla – Olson Engineering

Public Comment Period

- The Committee allowed up to 30 minutes for public comments on topics relevant to the Committee.
- No public comments were received.

Action Item 1 – Meeting Minutes – Appendix A

- TGC review and vote on final approval of Prior Meeting Date Meeting Minutes draft.
- The Committee reviewed the draft March 5, 2026, meeting minutes for final approval.
- Joe noticed an error on page 8, which should list 3 bedrooms, instead of one.

- *“Joe said he noticed that the legislature changed the tank capacity requirements to ~~one thousand~~ **900** gallons for ~~each bedroom in a~~ **three-bedroom** dwelling unit. Joe also has concerns about RV parks and apartments, and the new rules introduced a new term of structure”.*

Motion: Kellye Johnson moved to approve the March 5, 2026, meeting minutes with the identified edits.

Second: Joe Canning.

Verbal Vote: Unanimously approved with edits. The March 2026 meeting minutes will be posted to DEQ’s website within 30 days.

Old Business

Action Item 2 – Appendix B – Review, Amend, or Approve

- TGM Section 4.5.3.1 Drip Distribution System – Basic Design Requirements
 - The Committee continued its discussion of proposed square-footage and vertical-setback reductions for drip distribution systems.
 - The Committee reviewed the availability of additional technical literature and supporting information. No public comments or additional written information had been received.
 - No one had any additional updates to provide.
 - Jayson relayed AJ Maupin's view that the available information was not sufficient to support setback reductions for drip distribution systems.
 - Jason said that previously they approved that the nitrogen reduction, which occurs at the microcore level and causes denitrification.
 - Erik said the research said it was because denitrifying bacteria have been sent out to the field, and as time goes on, the effluent goes away, and the plants are a great benefit, but not the main drivers.
 - Joe said he doesn’t see the drip correlation, BOD bacteria reduction, and how they relate, or he hasn’t seen any good information on how it relates.
 - Kellye asked about winter performance and whether cold conditions hinder the relevant treatment processes.
 - Jason said research documenting BOD and coliform reductions was difficult to find, particularly for BOD, and that many studies focused on water recharge. He noted that one study addressing E. coli and fecal-coliform removal evaluated 18 to 24 inches of vertical separation.
 - Erik said not necessarily with direct correlation with the BOD, most of the research is regarding vertical separation, and it hasn’t produced as much information as they would like. Additionally, he’s not aware of any that directly correlates to BOD.
 - Joe said he agrees with AJ that it makes sense to do the rate if you use the appropriate system ahead of the drip, but he’s not sure if he’s willing to go any further with it than that.
 - Jason said that one of the studies he researched for E.coli and fecal coliform research shows 18 to 24 inches.

- Joe said it's probably mainly due to the BOD.
- Jason said from the nitrogen perspective, we discussed that the research shows that drip distribution is really about the soil treatment. Any of the benefits of the treatment is actually occurring at the soil treatment level.
- Erik agreed, 1 foot to vertical separation is what they found in their research. A larger area to disperse the application, and vertical separation allows more of the treatment to take place.
- Jason feels like it needs to be a data-driven decision. He said he's not opposed to it, but he would like the research to support it, otherwise he's hesitant. Additionally, he said other states are considering it, but no solid research verifies the reductions. It's unlikely it will lead to NSF testing. He also said that further research that's data-driven is needed.
- AJ commented that it should be preceded by pretreatment.
- Jason said that's the standard, it's a useful system, the only concern is that he thinks more diligent research is needed.
- Joe asked if we don't have enough research, should we keep tabling it?
- Jason thinks we have to table it unless everyone thinks there's enough research to support it.
- Joe asked if we should deny it for now and make a motion to deny it until adequate research can be evaluated and confirmed.

Motion: Joe Canning moved to deny the proposed square-footage and vertical-setback reductions until adequate supporting research is available.

Second: Kellye Johnson.

Verbal Vote: The motion passed unanimously.

Action Item 3 – Appendix C – Review, Amend, or Approve

- PlanetCare Hybrid Coir Biofilter
 - The Committee continued its discussion of system classification, the approval pathway, and Idaho-specific design requirements.
 - The Committee reviewed the status of the revised design manual and supporting documentation submitted by PlanetCare and discussed maintenance, service-provider, and installation considerations.
 - Jayson said PlanetCare was preparing additional information for the next TGC meeting and recommended tabling the item until that information is available.

Motion: Joe Canning moved to table the item until PlanetCare provides additional information.

Second: Kendall Unruh.

Verbal Vote: The motion passed.

Action Item 4 – Appendix D – Review, Amend, or Approve

- 2025 IDAPA 58.01.03 Updates – Tank Sizing and Piping Impacts
 - Continue discussion regarding implementation of:

- IDAPA 58.01.03.007.08.b Minimum Tank Capacities.
- IDAPA 58.01.03.007.20 Inlet and Outlet Piping.
- The Committee discussed interpretation and implementation considerations and whether TGM revisions or statewide guidance were warranted.

Minimum Tank Capacities

- Joe asked whether legal review had occurred. James said additional research was needed and that DEQ would seek a written interpretation.
- Jayson asked if the committee had further information to provide for the wording.
- Jason read IDAPA 58.01.03.007.08.b:
 - *Tanks serving all other flows. The minimum tank capacity per structure is one thousand gallons or a volume equal to at least two times the maximum daily flow, whichever is greater”.*
 - Based on the wastewater flow and the use in one structure, it may not warrant a 1,000-gallon tank capacity.
- Joe said he has a problem with a section in the manual, which has a huge impact, and he doesn’t see a definition of what a structure is.
- James said that the Deputy Attorney Generals agreed there is no clear definition of what a structure is.
- James shared his interpretation.
 - *“The hydraulic loading to soil has not changed. The required tank volume doubles purely because of the number of ‘structures’. For instance, when reviewing sewer infrastructure, if multiple tenant spaces share a single roof and building envelope, we typically treat that as one structure, even though each tenant may have its own plumbing and service line. A common example would be a strip mall with multiple units. Those units may each have internal service lines, but the shared line from the building to the public sewer is generally treated as a building sewer/service, not a regulated wastewater main. If every individual tenant connection created a separate ‘structure’ for regulatory purposes, nearly every multi-tenant building or multi-family complex would inadvertently create a regulated wastewater main, which is not how these systems are typically interpreted”.*
- James said he hoped to obtain legal review of that interpretation and prepare a memorandum explaining how "structure" should be applied.
- Jason said in his region, they encounter people with a shop would have the most contention regarding the straight interpretation. He expects a lot of conflict.
- Mitch agreed that 1,000 minimum would cause a lot of contention. Maybe review and add an additional 250 gallons for certain instances.
- Jason said unique projects occur; they’re not all straight across the board or standardized. Many different tank configurations across the state are approved.
- Erik said it might be better to focus on the residents' time with the septic tank before it goes on to the next process.

- Jason said that's what the tank sizing accomplishes and is reviewed on every project to ensure adequate residence time is considered.
- Joe asked why the rule changed.
- Kellye said Peter was looking at 1,000 gallons vs. 900 gallons.
- Kendall asked if it's just the wording.
- Joe is concerned with item A. He said normally that's fine, but he has multiple projects with 3-bedroom homes, and the tank size is a lot.
- James said it's the per structure that got edited.
- Jason said he didn't catch the wording change.
- James said that's why he's suggesting a memo to define what a structure is and how it's being interpreted.
- Joe said previously it was up to two dwelling units, and it got changed, and he's not as comfortable with it. He sees the benefit of having 1,000 gallons for single use. Additionally, he said, when you get more flow, that's the big difference.
- Kendall agrees that 1,000 gallons should be and is the minimum tank size, or two times the daily flow. Are we giving ideas so DEQ can consider them for a memo? Are we not able to change it?
- Jason said that's how he understands it.
- James said they're trying to determine tank size per structure and flow.
- Joe said he thinks the rule needs to be fixed.
- Kendall seconded Joe's statement.
- Joe would like to take the 900 gallons out and go back out to the old rule. He said 900 gallons is too small.
- Jason said that there are more apartment complexes and separate dwellings, and tanks can become excessive.
- Joe said that a dwelling unit is not tied to the boundary unit.
- Jason said it's a drastic tank size for a condo.
- Jason asked what the process would look like without a memo. He asked if it would require a variance request to DEQ.
- James confirmed with sufficient justification.
- Joe said it's defined as a single dwelling unit and would be a condo.
- James said we can either not do a memo and do the variance request as they occur, or we can create the memo.
- Joe said he recommended not to go through the variance request, as it's a slow process.
- Jason said that his concern is that if there's no memo, the variance request delays things, and he feels a memo would be best.
- Kendall said that Jayson has all the minutes, and he could look at the intent of what was meant to happen instead of what really happened.
- Jayson would like to confirm with the Deputy Attorney Generals first to make sure nothing conflicts before he changes anything.

Inlet and Outlet Piping

- Jason said it will be a source of contention on projects.

- Joe asked about the inlet and outlet piping.
- James shared his concerns regarding the piping rule.
 - *“Does the current rule language effectively prohibit ASTM 3034 effluent piping, or is there flexibility to interpret ‘Schedule 40 strength or stronger’ as a general durability standard rather than a strict pipe class requirement? Can the TGM still recognize alternative pipe materials, or would that require a rule change since the rule language now appears prescriptive?”*
- Joe didn’t realize the rule changed, but the 3034 is a very common pipe, and it’s a great pipe.
- Kendall said there’s a reason that 3034 is used; it’s a different composition, and it can flex without breaking the seal or leaking. What is the definition of strength?
- Joe would like to see it allowed and fix the rules.
- Jason questions whether there's been a performance regarding 3034; he’s not aware of any issues unless it’s a settling issue.
- Joe’s not aware of any either.
- Jason asked if the TGM pipe size and various uses allow 3034 for various uses? He said he’s not aware of any issues.
- Kendall has seen more schedule 40 pipe breaks than 3034 pipe breaks.

Motion: Joe Canning moved that DEQ Onsite Program staff prepare a memorandum addressing the tank-sizing and piping issues for review by the deputy attorneys general.

Second: Kellye Johnson.

Verbal Vote: The motion passed unanimously.

New Business

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

- Kendall said he noticed that different districts write permits differently and have different application rates. Is there a standard application rate for a proprietary system?
- Kendall said we can provide a design and it will get approved, but then when the permit comes back, it shows the standard loading rate.
- Jason said it is a balance to make sure the sizing standards, footprint, and loading requirements are met. They should be sized for loading rates to meet the minimum sizing. We should be using reduced loading rates. He said he will preview and address.
- Kellye said she would encourage them to reach out to the permit writer and confirm what they have is correct.

Discussion Items

On-site Wastewater Program Update

- **Technical Guidance Manual Updates**
 - Jayson provided an update on the Technical Guidance Manual (TGM), the Permitted Septic System Installer List, and the Permitted Septic Tank Pumper List.

- Jayson said revisions to the TGM language and Figure 2-8 would be completed before the next meeting.
- Jayson described the comprehensive TGM revision intended to improve usability, document maintenance, statewide consistency, and accessibility. He demonstrated the revised document structure and how information could be located.
- Jayson's recent updates to languages and fig 2.8, the update will occur before the next meeting.
- Update full revision to make the document more user-friendly for the permitted septic system. He's updated it internally, so it's easier to update. Jayson showed a demo of the updates to show how the info can be found. He said to reach out if anyone has questions. Additionally, items have been updated to show consistency and accessibility compliance. The TGM will also have to be updated to be ADA accessible.
- James said the TGM is the most visited and most downloaded on the website.

• **OSCAR-II and OSCAR-XO2 manual updates**

- Jayson had received the OSCAR-II and OSCAR-XO2 manuals and had not yet completed his review. He was awaiting additional manufacturer feedback on items identified at the previous meeting.

Regional Septage Disposal Capacity

- Kenny reported that Spokane may stop accepting septage from pumpers and said more advance notice would have been helpful.
- Jason said he was aware of the issue and planned to attend a meeting with the Coeur d'Alene Regional Office (CRO). He hoped to obtain additional information from the City of Spokane and noted that no adequate alternative had been identified.
- Erik said the change was expected to take effect the following year. Jason said the loss of the disposal option could create a costly regional problem.
- Kendall said the region had lost several disposal sites during the previous 10 to 15 years.
- Jason said declining septage-disposal capacity could make routine pumping more difficult and contribute to premature system failures if septic tanks are not pumped as needed.

Additional Action Items

Action Item 5 – Approve Motion to Schedule the Next Meeting

- The proposed date for the next meeting is Thursday, September 10, 2026
Motion: Kellye Johnson moved to schedule the next meeting for September 10, 2026.
Second: Mitch Kiester.
Verbal Vote: The motion passed unanimously.

Action Item 6 – Approve Motion to Adjourn the Meeting

Motion: Joe Canning moved to adjourn the meeting.
Second: Jason Peppin.
Verbal Vote: The motion passed unanimously, and the meeting was adjourned at 10:43 a.m.

Appendix B



OMEGA ONSITE PROCESSING (OSP)

Complete Pump-Out • Mechanical Filtration •
Same-Source Wastewater Return

Presentation to the Idaho DEQ Technical Guidance
Committee

Tony Vachon, General Manager & Inventor
George Bailly, Marketing / Client Relations
Omega Liquid Waste Solutions





Omega is not asking DEQ to approve our unique pumper trucks or waive normal pumper requirements.

We are asking one specific question:

May a properly licensed Idaho pumper:

- completely empty a septic tank or grease trap;
- separate the liquid and solids during pump-out;
- mechanically filter the wastewater onsite at 100 microns, with no chemicals or additives;
- return only that filtered wastewater to the same tank or trap from which it came, and
- haul the retained sludge, scum and solids to an authorized receiving facility?

Outcome we hope to attain: confirmation this method is not prohibited by Idaho regulations when all normal pumper, equipment, recordkeeping and disposal requirements are met.



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Conventional pumping removes and transports both solids and a large volume of liquid.

That method has four direct consequences:

- frequent trips to wastewater treatment or disposal facilities;
- more truck miles, fuel use, labor and vehicle wear;
- higher overall disposal costs; and
- less productive time available for actual septic service.

OSP reduces the volume that must be transported by separating the waste stream at the source and returning the filtered liquid to the same system.

The National Septage Disposal Crisis Alliance has documented increasing disposal-access and cost pressures affecting septage haulers nationwide.



3

A conventional pumper truck has one big waste compartment.

An Omega septic / grease truck has two independent compartments:

WATER COMPARTMENT

Located at the rear of the truck.

Roughly 30% of truck waste volume.

Receives the liquid fraction during pump-out before filtration.

SLUDGE COMPARTMENT

Tank size roughly 70% of truck total waste volume.

Receives scum, sludge, grease and retained solids for off-site disposal.

The truck also includes:

- vacuum system;
- transfer pump;
- 100-micron self-cleaning stainless-steel filtration system;
- air-actuated valves, pressure controls and relief protection; and
- operator control panel and wireless remote.

OSP is a fully automated operation.



OSP is not a partial pump-out.

The tank is completely emptied before filtered wastewater is returned.

This allows the operator to:

- remove the liquid fraction;
- remove the sludge and scum;
- expose the tank for normal inspection; and
- confirm that accumulated solids have been removed.

Only after the tank is empty and the inspection is completed does the return-filtration cycle begin.

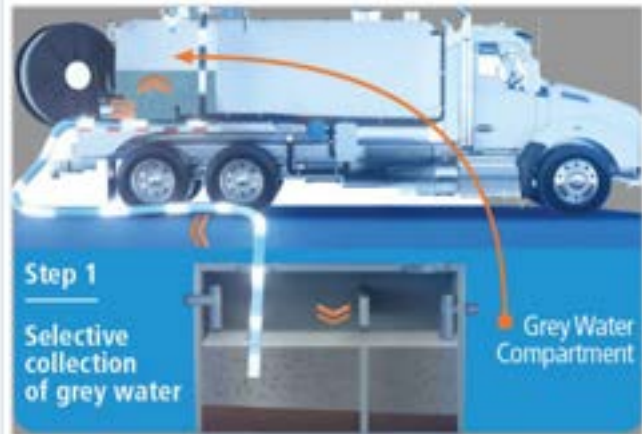
The same Omega truck can also perform a conventional full pump-out and haul 100% of the contents away when required.
(entire load is sent directly to the truck's sludge compartment)



STEP 1 – COLLECT THE LIQUID FRACTION

The operator pumps the wastewater into the truck's water compartment.

A clear section of vacuum hose allows the operator to observe the material being pumped



STEP 2 – COLLECT THE SOLIDS

When the liquid changes to sludge, the operator switches flow to the sludge compartment using his remote and removes the sludge and scum.

The vacuum process is not interrupted

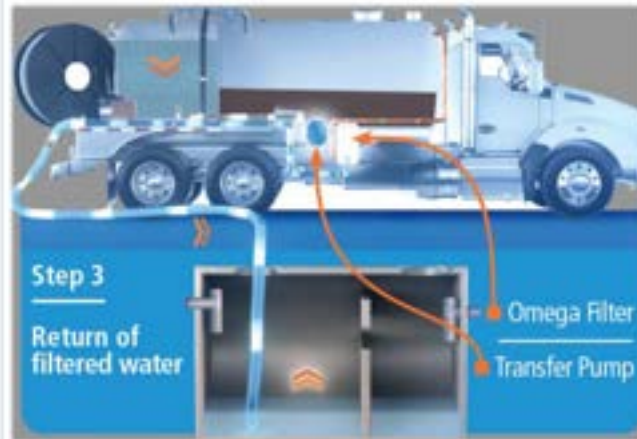


STEP 3 – FILTER AND RETURN

After the tank is empty and inspected, operator activates another button on his remote and wastewater from the water compartment passes through the Omega 100-micron filter and is returned to the tank.

No wastewater from a previous customer is returned – always the same tank from which the water came from

VIDEO: OMEGA OSP truck in action:
<https://www.youtube.com/watch?v=yv2Cesf1c10>



Mechanical liquid-solid separation — no chemicals or additives

- 100-micron absolute perforated stainless-steel membrane
- rotating filtration membrane operating at approximately 2,300 RPM
- self-cleaning action designed to prevent grease, fibre and solids from clogging the membrane
- bacterial flora essential to the proper functioning of the septic system is returned by the filtration system
- water return at approximately 170 gallons per minute

The purpose of the filter is to remove suspended solids from the liquid fraction before same-source return.



The return step is controlled by the truck - not by an open bypass.

KEY SAFEGUARDS

- water cannot be returned to the tank without passing through the filtration system.
- if the filtration system is unavailable, the operator performs a conventional full pump-out and hauls the entire contents away.
- separate valves control liquid collection, sludge collection and filtered-water return.
- pressure sensors and relief protection are incorporated into the filtration circuit.
- compartment levels can be monitored visually or electronically.
- an optional sensor can automatically switch collection from the water compartment to the sludge compartment when the liquid characteristics change.



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TRAINING

Omega provides onsite operator training when a truck is delivered, including actual field pumping and supervised operation.

MAINTENANCE

Omega recommends preventive maintenance of the filtration system every 2 years: (bearings and seals)

RECORDKEEPING

All normal Idaho manifests, pumper records and disposal documentation would still apply.

The two-compartment configuration allows the pumper to record separately:

- the volume removed from the customer's tank;
- the volume of filtered wastewater returned; and
- the volume of sludge/solids retained for disposal.

Recording the actual volume of wastewater and sludge separately can help pumpers demonstrate to customers their tank or trap should be serviced more often.



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RETURNED TO THE SAME SEPTIC TANK

- the liquid fraction originally pumped from that tank after mechanical filtration at 100 microns with no chemicals or additives.

REMOVED FROM THE PROPERTY

- sludge;
- scum;
- FOG;

(suspended solids captured by the filtration system are redirected to the sludge compartment)

The filter is not a disinfection system.

It does not claim to remove dissolved constituents, bacteria or viruses.

For septic systems, naturally occurring bacterial flora present in the wastewater may therefore remain in the returned liquid.



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INRS-ETE / Environment Canada evaluation of the first-generation Juggler process

- 10 septic tanks were monitored and sampled during field operation.
- Average removal efficiencies compared with characteristic septic sludge:

BOD ₅	COD	TSS	VSS	TKN
95.3%	94.8%	98.4%	98.2%	91.8%

The study reported

- no significant sludge accumulation in either tank section 24 hours after emptying; and
 - no drainfield blockage concern due to the quality of the liquid returned.
- The process used no chemicals.

Source: Environment Canada / INRS-ETE, Juggler Technology: Eco-Efficient Mobile Unit for Emptying Septic Tanks (2003).



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Immediate return restores the tank's operating liquid level after the tank has been emptied and inspected.

Potential practical benefits include:

- restoring hydrostatic balance and reducing buoyancy risk in high-groundwater conditions;
- avoiding the need to refill the tank with potable or well water;
- retaining the customer's own wastewater and bacterial flora rather than replacing it with fresh water; and
- rapidly re-establishing normal liquid levels before new household wastewater enters the system.

The returned liquid remains wastewater and stays within the same onsite wastewater treatment system from which it originated.

Environment Canada / INRS-ETE reported hydrostatic-balance and bacterial-flora benefits from returning the treated supernatant.



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OSP is not dewatering.

The retained material remains a liquid, pumpable septage/sludge stream.

Typical comparison: conventional mixed septage roughly 1% solids

Omega retained sludge
roughly 3% solids

The difference is concentration
- not conversion into cake or
semi-solid material

A 2025 laboratory sample of Omega OSP septic sludge measured:

Total Suspended Solids: 26,200 mg/L • COD: 5,410 mg/L
Ammonia-N: 71.7 mg/L • Total phosphorus: 71.3 mg/L

Before a truck sale, Omega recommends the prospective pumper verify acceptance with the facility where the retained sludge will be disposed.

Source: Environex laboratory certificate, Omega OSP Sludge / Septic Tanks Application, sample dated September 11, 2025.



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The same Omega SG filtration system can be used for grease traps.

The operating principles remain the same:

- complete evacuation of the trap;
- separation of liquid from grease and solids;
- 100-micron mechanical filtration;
- same-trap return only; and
- off-site disposal of retained grease and solids.

North Carolina State University evaluated onsite processing at six food-service establishments.

The study concluded that measured outlet oil-and-grease concentration after onsite processing was no different from grease interceptors serviced by traditional full evacuation.

Source: Joel Ducoite, Ph.D., BCEEM and Amanda Karam, M.S., North Carolina State University, April 7, 2021.



FOR PUMPER

- up to 5x fewer disposal trips;
- lower fuel, labor, tipping-fee and truck-wear costs;
- more customer service capacity per truckload;
- ability to offer either conventional pumping or OSP

FOR CUSTOMERS

- complete pump-out and inspection still occurs;
- potential 10–20% lower service cost when OSP is used;
- immediate restoration of septic-tank liquid level;
- bacterial flora is returned instead of carried away

FOR WWTF'S AND COMMUNITIES

- fewer truck arrivals for the same number of septic customers serviced;
- less diluted wastewater transported for disposal;
- reduced truck traffic and associated emissions

Complete pump-out first → Same-source return only → No bypass possible →
Filter failure = conventional full pump-out.



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University of Massachusetts Boston compared the Juggler/Omega process with conventional pumping

Estimated CO₂ reduction per service:

49–54% lower
residential septic operations

= 60% lower
commercial operations

The study also found that returning the extracted liquid to the septic system can reduce the export of local groundwater resources.

On Cape Cod, the study estimated 24–33.5 million gallons per year could remain within local aquifers rather than being transported away.

The principal environmental mechanism is simple: fewer disposal trips and fewer miles driven.

Source: University of Massachusetts Boston, Analysis of the Environmental Advantages of the Bluewater Recycler Truck, June 16, 2006.



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Technology lineage dating to 1998:

- first-generation Juggler systems field-tested and commercially deployed in North America; (> 2001)
- 200 units sold
- second generation called Omega (> 2010)
- improved flow, durability, and continuous self-cleaning operation
- approximately 400 filtration units sold across septic, grease and sewer-cleaning applications
- exclusive partnership with Vactor (sewer)

Omega's approach in every new State is the same:

Obtain regulatory clarity first, then sell and train licensed pumpers.



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BLUE: current use of OSP
ORANGE: OSP technology permitted

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Savings Liquid Waste



**Grease & Septic
Since 2009
Located in Ohio**



Septic Management Group



**Septic
Since 2023
Located in New Jersey**



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GREASECYCLE

Grease
Since 2016
Located in North Carolina




Treatment Facility

Julie Rogers
SEPTIC SERVICES



Grease & Septic
Since 2005
Located in Maine



IS OSP A COMPLETE PUMP-OUT PROCESS?

Yes. The tank is completely emptied before filtered wastewater is returned.

WHAT HAPPENS TO THE SOLIDS?

Sludge and scum are retained in the truck and transported to an authorized receiving facility.

WHAT PROTECTS THE SEPTIC SYSTEM AND DOWNSTREAM COMPONENTS?

100-micron mechanical filtration, full solids removal, same-source return, no chemicals, and independent septic field-performance data.

CAN UNFILTERED WATER BE RETURNED?

It is impossible to return water without having it pass through the filtration system. If the filter is unavailable, the operator must use the truck as a conventional full pump-out unit.

DO NORMAL PUMPER REQUIREMENTS CHANGE?

No. Licensing, equipment, spill prevention, manifests, recordkeeping and lawful disposal requirements remain applicable.



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Based on the information presented, we are asking DEQ to confirm that properly licensed Idaho pumpers may use this complete pump-out, onsite filtration and same-source return method.

- **pumper licensing and equipment**

Licensed operators and compliant equipment remain required.

- **manifests and recordkeeping**

Volumes pumped, returned and retained can be documented.

- **spill prevention**

Normal job-site and transport protections remain in place.

- **lawful disposal of retained sludge and solids**

Sludge/scum still goes to an authorized receiving facility.

Omega is asking for regulatory clarity - not an exemption from Idaho requirements.



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QUESTIONS & DISCUSSION

Thank you.

Tony Vachon • George Bally
Omega Liquid Waste Solutions

Omega and the disposal crisis
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