KITSAP PUBLIC
HEALTH DISTRICT

345 6th Street, Suite 300
Bremerton, WA 98337
360-728-2235

November 21, 2023

SENT VIA EMAIL

Peter Beaton
Washington State Department of Health
PO Box 47824
Olympia WA 98504

RE: KITSAP PUBLIC HEALTH COMMENTS ON PROPOSED LANGUAGE FOR CHAPTER 246-272A WAC

Dear Mr. Beaton,

Thank you for the opportunity to provide comments on the proposed rule language for Chapter 246-272A WAC. The Kitsap Public Health District (Health District) appreciates the Department of Health's (Department) efforts to ensure onsite sewage systems (OSS) in Washington State are being properly designed, installed, inspected, and maintained. The Health District wishes to provide the following comments and questions for consideration by the Department:

SECTION	COMMENT
0015	(1) How will DOH review existing LMP plans? What standards or guidance will be used to review a plan? (2)(b)(x) If a local management plan identifies an area where phosphorous is a contaminant of concern, what activities can an LHJ do to address this issue? There is no standard for phosphorous discharge in septic effluent and there are no DOH approved devices for phosphorous reduction. (3) How will DOH review existing LMP plans? What standards or guidance will be used to review a plan?
0120	For all installed proprietary products, what happens when that product then fails the field performance testing requirements? Requiring a compliance plan will not address installed systems that are not meeting the requirements of approved design. How does the state plan to administer the field sampling for devices that treat the sewage as part of their dispersal component? For example, OSCAR or

	Glendon systems, would require some sort of containment under the dispersal component to effectively catch the sewage for sampling.
0234	(4)(c) bed width should be expanded to 12 feet due to the common usage of gravelless chambers and their typical widths
0280	Table X has conforming systems that meet Class A waiver criteria outside of the conforming system label – as an example, a system that is 70 feet from surface water, has 30 inches of vertical, with Treatment B & DL2 is conforming following the waiver criteria. There should be a horizontal separation recategorization between 50-75 and 75-100 feet based on footnote 3.

Please feel free to contact me at (360) 728-2290 or john.kiess@kitsappublichealth.org if you have additional questions.

Sincerely,

John Kiess, RS
Environmental Health Director
Kitsap Public Health District

Dear Mr. Beaton,

As one who spent much time and effort on the ORRC I wish to comment in favor of the new proposed rule language. I encourage the SBOH to adopt the rule as written.

Respectfully,

Sent from my iPhone
Dave Lowe
https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.oscaronsite.com%2F&data=05%7C01%7Cpeter.beaton%40doh.wa.gov%7Cf6beabb0bb7b4027789808dbdcb334cf%7C11d0e217264e400a8ba057dcc127d72d%7C0%7C0%7C638346434472784726%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000%7C%7C%7C&sdata=jVbiMEdIH6849HH9DJxQHgr%2FSbPZ%2FQzDaXbwvMi7MlQ%3D&reserved=0
425-750-4922

Chapter WAC 246-272A Revisions = more government overreach making life less tolerable for the people and businesses. Do not implement any of the proposed changes.

Paul S Nowak, PhD, PE

16818 fN Madison Rd.

Mead, WA

Mark Soltman

I was not able to discern from the proposed revised rule why the bacteriological (FC) parameter was removed from Performance Levels A, B, and C, and established as a separate performance level DL1, DL2, DL3. Without a clear understanding of the reason for this change, the impact of this change throughout the rule is confusing to me.

I found this to be an interesting policy shift regarding departmental Recommended Standards and Guidance documents. It seems to move closer to regulating the application of on-site wastewater treatment and disposal technologies, not in rule, but through "Department Standards". It may be the shift to make at this time, but it was always a slippery slope for some citizens and the private sector that had concerns about the application of standards that were not specified in the rule. DOH Recommended Standards and Guidance documents developed by

staff and the TAC were presented as best applicable standards, and highly recommended to LHJs for inclusion in their local rule making processes, thus giving local health flexibility. Any chance that the new designation of "Department Standards" think that a "s" is needed at the end of "meet" to make it read correctly: the land "meets minimum…"As "septage" is a defined term, perhaps "septage" is a better term here rather than "septic"? Reading this as written my mind wants an answer to the question "septic 'what' backing up". Clearly septic contents, which is already defined in the rule: septage.

It occurs to Was it intended to define "residential sewage" as septic tank effluent. What about raw sewage entering a septic tank of a residential system. Certainly it can't be septic tank effluent quality when it enters the tank. Even Table III identifies that Treatment Level E is for septic tank effluent. Clearly STE and residential sewage are not to be defined as the same thing.

that fill material is often intended to be consolidated. Why is it specified "unconsolidated"

Insert "soil" so that the term is complete "soil dispersal component"

Does this open the door to install a SSAS in fill material? I always thought that an SSAS needed to be installed in undisturbed soil of a suitable soil type. Other than using ASTM-33 sand as suitable fill material for pressure distribution systems, how is this provision to be used? While this definition is added with this rule revision, the term is not used in the document, at least as the definition is developed here. Other than use of ASTM C-33 sand in the Repair of Failures section, and backfilling with cover material in the Installation section, and void filling with soil or gravel in the Abandonment section, the term "fill", as it relates to this definition, is not used. Just curious.

And, for consistency, insert "soil" before "dispersal component"?

This seems to suggest that fill meeting the textural criteria may be used for a soil dispersal component. This seems to violate the broader provisions of the definition of "suitable" soil, which includes "original, undisturbed, unsaturated". Is the intended? Or an unintended consequence?

Just curious what this is intended to address. I'm wondering if it could easily include: garbage, junk, boulders, oyster shells, tree trunks, etc.? If so, was this intended?

think that a "s" is needed at the end of "meet" to make it read correctly: the land "meets minimum…"

Insert "soil" so that the term is complete "soil dispersal component"

Insert "soil" so that the term is complete "soil dispersal component"

I think this is referring items (a) through (i) in the definition of "minor repair". I suggest referring to the definition lest readers wonder where the "list for a minor repair" is located. Swap "definition" for "list" in this line of text.

Was it intended to define "residential sewage" as septic tank effluent. What about raw sewage entering a septic tank of a residential system. Certainly it can't be septic tank effluent quality when it enters the tank. Even Table III identifies that Treatment Level E is for septic tank effluent. Clearly STE and residential sewage are not to be defined as the same thing.

As I consider the new Treatment System Performance Levels DL1, DL2, DL3 it occurs to me that rather than "Disinfection Levels" these are bacterial levels *to be achieved by disinfection.* (which is what exists in the current rule). An awkward element that arrives later in the draft rule when achieving the new Disinfection Levels can not be achieved by disinfection. This conflict of terminology is jarring. Calling these "Bacterial Levels" would eliminate the conflict of terminology.

note that while this provision is removed from the definition it is retained in the rule in Section 246-272A-0110(5) where Field Performance Verification is introduced and linked to the DS&G for Proprietary Treatment Products.

Another instance of the matter of departmental standards vs. departmental "recommended" standards. Are As written these two items, a & b, are an awkward read following the lead-in provided by item 1 in the section. I suggest using the phrase "when striving to meet" instead of "for".

Manufacturers shall, for the purpose of product registration as described in WAC 246-272A-0110 and 246-272A-0120,

(a) when striving to meet treatment level DL,1 verify bacteriological reduction performance by sampling for fecal coliform or *E. coli.*

(b) when striving to meet treatment level DL2 or DL3, verify bacteriological reduction performance by sampling for fecal coliform.

standards for "field compliance" appears to only address Fecal Coliform. Is that intended?

What does the superscript "1" mean here? What, if anything, does it refer the reader to? Also, the phrase "supplemental bacteriological reduction technology" occurs only twice in this draft, here in this part of Table II. Why introduce a new term or phrase for disinfection processes/products, which is defined in this draft rule. Wouldn't "supplemental disinfection" suffice?

As the rule is proposed there is not a Performance Level with the singular letter "D". Perhaps it should read "Values for Levels A-C, and DL1,DL2, and DL3 are 30-day values…"

For consistency it may be better to leave "proprietary" and insert "registered on-site" in front of the word "proprietary". The current "List of Registered On-site Treatment and Distribution Products" titles Section 2 as "List of Manufacturers of Registered Proprietary On-site Products".

Or strike "proprietary" as proposed and make changes for consistency of language in other documents.

Another instance of placing requirements, in this case on manufacturers, that are to be established outside of the rule development process. Does simply stating that the requirement to be met is identified in departmental standards sufficient to pass the public rule development process for establishing lawful requirements. ALSO, what does the phrase "dated the effective date of the rule" mean here? What is to be dated with the effective date of the rule (I assume it means this proposed rule): the field performance report or the DS&G. Perhaps some clarifying editing is needed here?

ALSO, perhaps the word "treatment" needs to be inserted between "proprietary" and "products" in the statement relating to the standards and guidance document, to clarify the distinction between treatment products and distribution products?

As written these two items, a & b, are an awkward read following the lead-in provided by item 1 in the section. I suggest using the phrase "when striving to meet" instead of "for".

Manufacturers shall, for the purpose of product registration as described in WAC 246-272A-0110 and 246-272A-0120,

(a) when striving to meet treatment level DL,1 verify bacteriological reduction performance by sampling for fecal coliform or *E. coli.*

(b) when striving to meet treatment level DL2 or DL3, verify bacteriological reduction performance by sampling for fecal coliform.

This statement is also a bit awkward. Perhaps a suggestion:

(b) When testing treatment product or treatment component sequence according to the NSF/ANS*I* Standard 40 testing protocol.

This seems smoother to read. (channeling my "plain talk" training from the last decade of my time with DOH, exchanging a 1 syllable word for a 3 syllable one. Ha!)

This is where referring to bacteriological standard levels as "disinfection levels" is most awkward. It strikes me that stating that manufacturers may not resister products for Disinfection Level 3 (DL#) using disinfection presents a conflict of words. When the bacteriological standard was retained in Performance Levels A, B, and C, the text of the rule that limited the use of disinfection with Level C made sense and did not present an awkward

use of words. If separating the bacteriological standards from the other parameters in Performance Levels A, B, and C is desired, that could still be accomplished by identifying these new performance levels as "Bacterial Levels" or "Coliform Levels". With this approach the established restriction on using disinfection to achieve BL3, or CL3 would not present the awkward terminology that exists when the "Disinfection Level" terminology is used.

For consistency it may be better to leave "proprietary" and insert "registered" in front of the word "proprietary". The current "List of Registered On-site Treatment and Distribution Products" titles Section 2 as "List of Manufacturers of Registered Proprietary On-site Products".

Or strike "proprietary" as proposed and make changes for consistency of language in other documents.

Insert "soil" so that the term is complete "soil dispersal component"

This text is addressing gravity flow OSS. The rule maintains definitions for "sewage tanks" and "septic tanks". It seems to me that virtually all gravity flow OSS would use a septic tank. Not sure what is being clarified here by converting "septic" to "sewage" in this subsection. Unless this change is done to capture OSS with a lift station and pump to a gravity flow SSAS in the "gravity OSS" category.

This is another place where gravity flow OSS is being addressed. As nearly all such systems will be using a septic tank, I question the benefit of changing the term from "septic" to "sewage".

I note that the Summary of Key Draft Rule Changes (October 2023) states for this subsection that a requirement for DOH to maintain a guidance document on remediation. I don't see this requirement in this draft of the rule. Was the requirement for a guidance document removed from the draft rule by intent or simply an oversight? If by intent, then the Summary may need to be corrected.

My comment here comes before I have had the opportunity to explore the backstory for this new section. Supporting this new section is a defined term "remediation" that defines what a remediation is not. Without knowing the backstory, all of this seems like a potential "back door" to sewage system technology experimentation. Over the past 30 years progress has been made to assure that systems and processes used are well established, tested, reviewed and approved. How will this new provision interact with the RS&G for Remediation Technologies and Processes? Hopefully if I can get the backstory on this item my concerns will go away.

Table VI uses the term "distribution", as in "method of distribution". Shouldn't "distribution" be used here instead of "dispersal"?

Under the new scheme where bacteriological reduction is addressed as a Disinfection Level, 1 through 3, Treatment Level A no longer shows up alone, it is joined with DL1. Should that change be reflected here, too?

Insert "soil" so that the term is complete "soil dispersal component"

Eliminating the Method 1 and Method 2 distinction doesn't add any clarity to how this reads. There remains two methods: That presented in Table XI, and that which begins with subsection (1) (*e) Require all proposals not meeting the minimum land area requirements in Table XI of this section to demonstrate the proposed development:*

Table XII more accurately presents a condition (maximum daily TN load) of this alternative methodology rather than presenting minimum lot sizes. This TN condition is joined by others listed in 1e, which constitutes the alternative method to determine minimum lot size.

I think this topic could benefit from additional editing for clarity.

One fix for this would be to end statement (d) at the first comma, striking the phrase "or the alternative methodology in Table XII of this section" and move the sentence about the local health officer to a separate letter designation (that would become "e", causing all other lettered items in the line to shift down one). This change allows the provision established in the sentence *Require all proposals not meeting the minimum land area requirements in Table XI of this section to demonstrate the* Table XII of this section" and move the sentence about the local health officer to a separate letter designation (that would become "e", causing all other lettered items in the line to shift down one). This change allows the provision established in the sentence *Require all proposals not meeting the minimum land area requirements in Table XI of this section to demonstrate the proposed development:* to direct persons to the various conditions that apply, including the TN max loading presented in Table XII.

Any reference to Table XII as an alternative methodology would be dropped. Table XII would be presented as a condition that applies to "proposals not meeting the minimum land area requirement in Table XI".

YPO: This table title is missing the table number, TableXII slipped below the table.

Insert "soil" so that the term is complete "soil dispersal component"

The words "may be" is redundant in this sentence as the lead in "(1) ...may initiate enforcement action. Enforcement action *may* include, but is not necessarily limited to:"

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1. WAC 246-272A-0001(1) does not prioritize the interests of WA property owners as the Purpose of the OSS Regulations. The Code should emphasize that the role of Administration is to assist and cooperate with the property owners, by assisting and training them in managing household waste in the most efficient and environmentally friendly manner.

To correct this issue the following wording is suggested:

WAC 246-272A-0001 Purpose, objectives, and authority.

(1) The purpose of this chapter is to assist single family homeowners in managing household biodegradable organic waste in the most efficient way to prevent contamination of surface and ground waters with untreated sewage and solid organic waste, conserving and recycling waste waters and protecting the public health. ~~by minimizing:~~

~~(a) The potential for public exposure to sewage from on-site sewage systems (OSS); and~~

~~(b) Adverse effects to public health that discharges from OSS may have on ground and surface waters.~~

It would be even better, if the Department would prioritize this purpose in WAC 246-272A. Regrettably, paragraphs 0230 (1) and 0430, which place absolute power in the hands of one person (LHO) in each County without any definite provisions on how to contest their arbitrary decisions, tell the opposite.

2. WAC 246-272A-0100 "Sewage technologies" does not list or describe or clearly reference such listings and descriptions of public domain technologies commonly used for wastewater treatment in the world. The reference to the Department's Standards and Guidelines (DS&G) is unclear and the reader of the Code is left wondering where to find these DS&G.

Vague references are not appropriate for a legislative document. (The Freedom of Information Act)

The lack of a comprehensive list and description of modern wastewater treatment technologies in the Code means that local health officials (LHO) may not be aware of the full range of existing technologies and may, from time to time or deliberately, abuse their authority by omitting the most cost-effective ones for specific conditions and properties of the construction site. To correct this issue, the following sample content draft is suggested: WAC 246-272A-0100 Sewage technologies.

a) WAC 246-272A-0100 does not describe or implement a very important part of household organic waste treatment described in Paragraphs 3.5.2 and 3.5.3 of USEPA "Onsite Wastewater Treatment Systems Manual": separate treatment of blackwater, graywater and solid organic waste.

b) WAC 246-272A-0100 does not describe Public domain ATU systems. ATU systems were first used a century ago, have come a long way and are widely used throughout the world, with the exception of Washington State. They greatly exceed the efficiency of septic tanks, as shown in Table 3-19 of USEPA "Onsite Wastewater Treatment Systems Manual", in many cases with effluent quality much better than A and DL1 levels, depending on design and use.

It should be noted that such effluent quality and operational reliability can be reliably achieved if incoming blackwater does not contain solid organic waste and detergents from laundry, which can significantly deteriorate the operation of the ATU.

In addition, unlike septic tanks, ATUs do not emit methane into the atmosphere, a very powerful greenhouse gas (twenty eight times stronger than CO2).

3. WAC 246-272A-0200 of the Revised Code is good for the last century. Advances in technology over the past decades have ushered in a new approach to permitting and design of CSOs that can and should be done online.

Each county has GIS maps and descriptions of soil composition and hazards for each site. This information, combined with the precise description of OSS technologies and components in this Code or in DS&G, can be used to develop AI trained in OSS technologies.

The property owner or her/his authorized representative can contact the AI online to fill out an application form and receive tips on the placement, type and design of a suitable OSS. In the event that the AI offers multiple possible design and placement approaches, it is the responsibility and privilege of the property owner (not the LHO) to select the option that best suits her/his needs.

4. WAC 246-272A-0210 (Location) is filled with arbitrary requirements. Any OSS constructed in accordance with the design requirements set forth in this Code or in DS&G shall treat black and gray waters to Level A and above DL1 and may be discharged to surface waters. This is especially true if wastewater from the home is treated in an ATU and a subsurface dispersion system. Contamination of wells with OSS outflows can occur if there is no a restrictive layer below the topsoil (which is a very rare case in WA, where topsoils are formed by volcanic lahars) and the requirement to maintain a distance of 100 feet from the OSS is not justified. The same can be said for many of the other horizontal separation distances listed in Table IV.

5. WAC 246-272A-0220 (Soil and site evaluation) has a vague description of the process. The statement in paragraph (1) that: “Only professional engineers, designers, or local health officers may perform soil and site evaluations” results in the site's winter groundwater level being incorrectly determined. Current practices are such that LHOs request the owner to dig three 6-foot-deep test pits and, when they arrive, measure the length of grass roots in the pit. They call it the “Percolation Test” stating that the length of the grassroots determines the winter watertable and therefore the "vertical separation".

This is very far from the true situation in Western Washington. In fact, if the surface is relatively flat, the water table will be near the surface for most of the winter. And this situation has very little to do with the type of soil and slightly depends on the depth of the restrictive layer, which determines how long it will take for the groundwater level to approach the surface. Usually this happens in the early or mid December or so.

Undoubtedly, all farmers know soils content and the winter watertable on their properties much better than any soil specialist or LHO, because the soil is the major source of their income. WAC 246-272A-0220 prevents them from managing their properties in the way they think is best.

6. WAC 246-272A-0230(1) The fact that the Department does not maintain good DS&G with precise description of OSS components and does not reveal it to the public brings to archaic approach to the procedures of OSS design and installation. In fact it causes that,

firstly: department-licensed contractors are shielded from market competition;

secondly: puts unlimited and incontestable power in the hands of one person in each County called LHO.

Giving unjustified preferences to certified designers and unlimited power to LHOs are evident deviation from the major ideas of a democratic society and UDHR.

Besides, all OSS technologies have been around for many years and all certified designers have just a few ready-made files that they use in their daily "design" process. AI trained in OSS design can do the same.

7. WAC 246-272A-0230 (2)(a) contradicts to recommendations of paragraphs 3.5.2 and 3.5.3 of USEPA "Onsite Wastewater Treatment Systems Manual", which recommend separate treatment of blakwater, graywater, and organic solid waste. Laundry water completely disrupts the wastewater treatment process in the septic tank and ATU. Organic solid waste clogs tanks because the solids require more bacterial work, which significantly increases the temperature, which is not possible in a water-filled tank. For this reason, solids take considerable time to turn into sludge and are the main source of dissolved solids in the effluent, which ultimately leads to the formation of biomats in dispersion systems and deterioration of OSS performance.

This is the matter of importance to accomplish paragraph (2)(a) with plumbing requirements for newly constructed houses:

8. WAC 246-272A-0230 (2)(d) and its subparagraphs shall take into account separation of blackwater and graywater.

9. WAC 246-272A-0230 (2)(e) and subparagraphs are worded oddly, to say the least. In DS&G the Department shall list and describe the well-known and developed components of OSSs with effluent qualities that can be discharged to surface waters, and make recommendations as to which of these components should be used depending on the environmental conditions of the site.

The responsibility of the OSS builder is to correctly install the described components in accordance with the recommendations given in this Code. OSS builders shall not be required to measure the quality of the resulting water.

This is the essence of the Public domain OSSs, which is not observed in these paragraphs.

10. WAC 246-272A-0230 (2)(f) repeats the same mistake as (2)(e), Table VI fails to describe what treatment and effluent dispersal units are advised to use depending on the construction site properties. Rationally, Table VI shall look like Table 2-1 "Selection of disposal methods under various site constraints" in US EPA 625/1-80-012 DESIGN MANUAL.

An example might look like follows:

Table VI. Selection of dispersion method for Septic Tank with effluent quality of E

Method	Site properties											
	Soil			Bedrock			Watertable			Slope		Small size
	1	2,3	4-6	Shall	mid	dip	Flood <1’	6”<3’	>3’	<5%	5%<15%	
Subsurf Gravity			x			x			X	x	x	
Gravity&drainage								x		x	x	X
Mound	x	x	x	x	x	x		x		x	x	X
Chamber		x	x		x	x			X	x	x	
Drip		x	x		x	x			X	x	x	
Pressure		x	x		x	x			X	x	x	
Sand filter		x	x		x	x			X	x	x	

Table VI cnt. Selection of dispersion method for ATU with effluent quality of A&DL1

	Site properties				
	Soil type	Bedrock	Watertable	Slope	Small size

Method	1	2,3	4-6	Shall	mid	dip	Flood <1’	6”<3’	>3’	<5%	5%<15%	
Subsurface Grvt		x	x			x			X	x		X
Grvt&drain		x	x			x		x		x		X
Mound&gravity	x	x	x	x	x	x	x			x		X
Chamber												
Drip												
Pressure												
Sand filter												

WAC 246-272A-0232 fails to describe blackwater separation requirements and ATU requirements.

Suggested corrections of WAC 246-272A-0232 can be found here.

WAC 246-272A-0234 (Design requirements—Soil dispersal components.) does not list all technologies used for dispersal of effluent from treatment tanks, and does not provide for a link where such requirements to all types of dispersal components can be found. Separation of blackwater, graywater and solid organic waste is not taken into account.

Along with general requirements to dispersal components specific requirements to every type of dispersal components shall be listed or a reliable link to such requirements shall be given like this exemplary description of major subsurface and mound components.

WAC 246-272A-0250 Installation. (1) unreasonably limits the rights of the owner to manage his-her property in the most appropriate way.

The Code does not reveal clear descriptions of how to construct all components of OSSs. Instead, WWMS DOH gives this information into the hands of few installers and requires to use their services. LHOs do not have a right to decide who fulfills the installation, if the installed components of the system meet the requirements.

“WAC 246-272A-0430 (1) When an OSS is out of compliance with any law or rule regulating OSS and administered by the department or the local health officer, the department or the local health officer may initiate enforcement action. Enforcement action may include, but is not necessarily limited to:

(e) Civil or criminal penalties authorized under chapter 70.05 RCW and RCW 43.70.190;”

This wording means that the Purpose of the Code to prevent environmental pollution is forgotten and any deviation from the Code is punishable up to “Civil or criminal penalties”. If a property owner builds an OSS of a good quality but not listed in the Code or in some other way treated organic household waste without polluting the environment, he may be punished by personal decision of LHO without any way to contest this decision.

It’s not only WAC 246-272A fails to list the full spectrum of technologies and hides them from the public, it also punishes anyone for disobedience and initiative. To an LHO, all people are criminals except those who obey and pay all required fees and charges.

The real situation is that a deputy sheriff supervises the environmental section in the County, and very frequently the property owners deal with people, who simply do not know (or neglect) the full spectrum of household waste treatment technologies, and there is no provision to contest these impromptu decisions since there is no a competent board of appeal.

Further, the current practice is for the local environmental department law enforcement officer (deputy sheriff) to issue violation tickets to property owners without bothering to provide evidence of environmental pollution. If the owner decides to contest this ticket because he did not pollute the environment, magistrates in local courts are biased in favor of the administration because they simply don’t understand the essence of the dispute. Such hearings are turned into a farce with 100 percent predictable outcome when no arguments are considered impartially and competently, and the property owners are deprived of an ability to find justice.

This is a clear example of how noble intentions have turned into police violence without achieving their stated goals.

Conclusions.

The proposed draft maintains all flaws of the original WAC 246-272A and:

1. does not list and clearly describe the variety of efficient organic household waste treatment technologies known to mankind and prevents usage of the most efficient ones in practice;

2. unreasonably limits the rights of the owners to manage their properties in the way which they consider appropriate, giving unlimited power of decision into the hands of LHOs;

3. contains many arbitrary requirements;

4. is not acceptable for approval and needs a thorough scientific and legal examination by independent specialists and lawyers.

Peter, if you publish my comments on the DOH website, please, give me a link.

Thank you.

Have a good time.

George Danilov

Physicist

Tel: 360-515-7719

e-mail: permaculturefarm19@gmail.com

mail: PO Box 125, Curtis, WA, 98538

Proposed Design Improvements to Pressurized Drainfields for
On-site Sewage Disposal Systems

by Douglas Catey, P.E.

Introduction:
In the process of consulting on the failure of pressurized drainfields, one mode of failure has recurred quite often. At the interface between the discharge holes in the pressurized laterals and the adjacent drainrock, clogging often occurs. Several reasons for clogging at these points are:
1. A piece of drainrock happens to end up right against the lateral at the hole location. The percentage of holes thus blocked is not insignificant, and depends on drainrock size.
2. Fines migrate into the drainrock and fill the interstices between rocks. This is unavoidable to some degree, but is exaserbated by poorly washed drainrock, or poor filter fabric placement or quality. I witnessed one failure due to filter fabric disintegration, and resultant fines contamination, in a drainfield that was otherwise in pristine condition.
3. Discharge of solids from the septic tank pump chamber.
4. Build up of a biologic "slime layer".

Suggested prevention or delay of this failure mechanism:
I suggest some simple, low-cost modifications to the installation of drainfield laterals that should help prevent or, at a minimum, delay failure due to clogging at the lateral discharge hole / drainrock interface.

The principle is to create an air gap between the lateral and the drainrock. One possible method would be to cut longitudinally a length of 4-inch diameter, corrugated, incised ADS (or equal) drainage pipe. This creates a pair of "U" shaped pieces in cross-section.

After placing the laterals on a bed of drainrock, the inverted "U" drainage pipe halves would be centered over the laterals. They can be held in place with shovelsful of rock, before covering the entire system with a layer of drainrock, followed by high quality filter fabric, and then native

soil up to grade.

This creates the desired separation between the lateral discharge holes and the drainrock.

Corregated, incised drainage pipe is preferable to smooth pipe with holes, for the same reason of preventing clogging between the pipe and drainrock.

Cross-connecting the laterals at intervals (say 10 feet) would not only anchor the laterals in the center of the drainage pipe sleeves, but would also tend to equalize the flow distribution throughout the laterals.

Finally, adding long-sweep ells with risers to grade at the end of each lateral would aid any future flushing or jetting of the laterals. The risers could be encased in 4-inch diameter PVC pipe with unglued slip fitting caps. This would alert the owner to the location of the drainfield, protect the lateral risers, and enable simple inspection of the drainrock for standing effluent.

Considerations:
1. In this system, discharge holes in the laterals would best be placed horizontally in the laterals and alternate left and right sides.
2. Some care would be required to assure the sleeves are placed correctly.
3. The longevity of drainage pipe in an effluent environment needs to be ascertained. ADS polypropylene pipe is also manufactured for drainfields, so testing has probably already been performed on the suitability of the material. Long-sweep ells are most readily available as electrical conduit, but electrical conduit is not pressure tested, so may not be suitable for use at the end of laterals, even though laterals are generally low pressure.
4. Should these proposed design modifications be optional?

Conclusion:
These proposed modifications should increase the ease of maintenance, effectiveness, and longevity of septic system drainfields, at a minor cost increase in materials and labor.

Nov 14 2023 3:13PM

There is no direction in the rules anywhere about old systems that must be inspected, that have not failed, but are older than the local health district has records for. Section 246-272A-0025 (Connection to public sewer system) is the closest, but it is only for systems that have failed. I suggest adding specific evaluation steps for addressing pre-historic OSS.

Nov 26 2023 11:41PM

Page 13 - WAC 246-272A-0001 (6) Consider adding "Based on an established SOP approved by the state board of health instead of subjective decision by Health Department staff who might be biased and inconsistent ruling on each situation.

Page 44 - WAC 246-272A-0200 Permit Requirement. Consider adding "See attached example of permit application with gravity O.S.S. design layout)

Page 46 - IAW the established SOP Page 46 - IAW the established SOP

Page 51 - Consider removing to match section 13.20.040.

Page 51 - Consider providing justification or technical support

Page 51 - Based on tecnical support and justifications.

Page 59 - Consider changing to "may personally design, construct, install, or repair a gravity system for the resident owner's own single family dwelling under IAW Section 13.20.040.

Page 59 IAW Section 13.20.040

Page 62 Consider changing to "a partical"

page 65 Consider changing to a practical

If you have any question on my comment, please contact me at dragonerik@yahoo.com. Thank you, Eric Long

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November 28, 2023
Peter Beaton
Washington Department of Health
PO Box 47824
Olympia WA 98504-7824
Re: Comments on CR-102 for On-Site Sewage Systems, Chapter 246-272A WAC Revisions

Dear Mr. Beaton,

I am submitting these comments on the CR-102 for the On-Site Sewage Systems, Chapter 246-272A WAC Revisions on behalf of Taylor Shellfish Farms.

Taylor Shellfish Farms is a 5th generation family-owned shellfish farming business based in Shelton, Washington. We are the largest producer of farmed shellfish (oysters, clams and mussels) in the United States. We do this with help of 600+ employees on 14,000 acres of tide and bed lands that we own or lease in six counties in Washington state.

The National Shellfish Sanitation Program (NSSP) has strict water quality standards for shellfish growing waters to ensure the shellfish we produce are safe to consume. For the past thirty plus years as Director of Public Affairs for Taylor Shellfish Farms, much of my work has been dedicated to ensuring our growing waters continue to meet those strict NSSP standards. Much of that work has been focused specifically on the threat posed by failing on-site sewage systems. This included serving on the Shellfish Advisory Committee in the early 2000s to determine if revisions were needed to WAC 246-272A, then subsequently on the Rule Advisory Committee that worked on those rule revisions that were ultimately adopted in 2005. I also served on an advisory committee for updating the Large On-Site Septic regulations and was involved in lobbying to get HB1458 passed in 2006 to require counties to form Marine Recovery Areas with enhanced on-site sewage oversite adjacent to shellfish growing areas. I have also actively worked with counties regarding their on-site sewage regulations and programs.
Most recently I have had the pleasure of serving on the Department's On-site Rule Revision Committee (ORRC) that developed the rule update included in CR-102 WSR 23-22-062. As with prior Department of Health rule advisory committees I have served on, the process followed was exemplary. In my opinion the department went above and beyond to ensure that a broad representation of stakeholders and experts were included, and a process and ground rules were followed to ensure all opinions were heard, respected, and responded to.

While the pandemic created an unfortunate delay in bringing these rule revisions before the Board of Health, it gave me an opportunity to revisit them with fresh eyes as well as take a stroll down memory lane reviewing 25 years of my on-site sewage policy involvement.

Reviewing my DOH on-site sewage folder I am reminded of all the great work done over the years by the Department and Board of Health to improve on-site sewage management and oversight in Washington. The proposed updates to WAC 246-272A before you in the CR-102 continue to build on these efforts with some important improvements to the rule which we urge you to adopt.

We support all the proposed revisions but in particular we want to call out our support for the changes to WAC 246-272A-0015 regarding Local Management Plans (LMPs). With shellfish farms in six counties in Washington we observe a wide range of commitment to implement LMPs and consequently, their effectiveness. The changes which include a review by DOH 2 years after adoption of the rule to determine adequacy, updating to address inadequacies, periodic review by the LHO and DOH and annual reporting by the Puget Sound Counties will be instrumental in improving consistency of implementation of the WAC and its effectiveness throughout Puget Sound Counties. A key requirement that has been added to the LMP is a description of the capacity to implement the management plan, which includes a summary of program expenditures by activity, source of funds, a strategy to fill any funding gaps, and the ability to find failing and unknown systems. We also are pleased to see that areas where sea level rise may impact adequate horizontal separations to surface waters is proposed to be added to the list of areas where OSS could pose an increased public health risk.

Thank you for the opportunity to comment in support of adopting the revisions to WAC 246-272A. I look forward to working with the Department and LHJ's on implementing them in the years ahead.

Sincerely.

Bill Dewey
Director of Public Affairs
Mobile: 360-790-2330
Email: billd@taylorshellfish.com

Hi Peter,

Thank you for taking our comments late. Here are comments for consideration.

Entire Document

- Ensure consistent use of mL (little m, big L) for milliliter abbreviation.
- Ensure the use of oxford commas.
- Confirm with DOH Style Guide the use of a hyphen between measurement and unit. Ex. 30-percent vs 30 percent (vs 30%); 12 inch vs 12-inch.
- Ensure initial table references are consistent. Some are simply Table X of this subsection while others are Table X, Title.
- Ensure the abbreviation for Escherichia coli is *E. coli*. Big E, dot, space, little c, all italics.
- Several manuals or guidance documents are referenced with edition years. Consider adding "or newer editions" so that the WAC does not need to be updated to be able to reference the newest edition of a manual.

Section 246-272A-0110

- Footnotes for Table II are missing.
- Table III uses two units for fecal coliforms and *E. coli*. These should match as cfu/100 mL.
- FC and EC results are typically in cfu/100 mL, however, MPN is also a common result unit. Consider clarifying the treatment level required in both CFU and MPN as the two values are not directly comparable.

-0120

- Confirm with DOH Style guide that dates do or do not the "st" or "nd" after the number. Ex. December 31st vs December 31.
- (7) "…a list of [proprietary treatment products]…" change to "registered on-site treatment and distribution products" to make consistent with other subsections.

-0145

- Subsection (6)(a) has a date of November 1 while -0120(6)(a) has a date of October 31. Are these supposed to be the same dates?

-0170

- Subsection (2)(a). Consider adding clarification that the OSS must be for the parcel that is intended to be used for testing new product. Without clarification, an applicant could supply proof from any existing conforming OSS within a county. Ideally this would be caught in the application review process but clarifying in the WAC would help eliminate the loophole.

-0200

- Subsection (4)(d) references subsection (1) however, it should reference subsection (2).

-0210

- Please clarify the difference between wells and nonpublic drinking water wells. With the same horizontal separation, two separate lines in Table IV does not seem to be needed.
- Table IV is missing footnotes for 3-8. Please provide.
- Table IV outlines nonpublic, in-ground, drinking water containment vessel but excludes the public equivalent. Consider adding.

-0230

- Subsection (1). Add back the "s" after designer or remove the "s" after engineer to make consistent singular or plural.
- If no bedrooms in additional dwelling, then what? (2)(d)(ii)(B) & (2)(d)(iii)(C)

-0232

- Table VII. The number of values in each column do not appear to match; three values on the left and two on the right. Please provide a cleared tracked changes table.

-0233

- Recommend putting "pump basin" in the definitions rather than in WAC subsections.

-0234

- Ensure that each (letter) sections following "meet the following requirements" are in complete sentences. Most of the items listed are missing a verb leaving no 'action' for the designer to take.

-0250

- Recommend adding "licensed" between only and installers in Subsection (1)
- Subsection (2)(c) references "Table IX standards in WAC 246-272A-0270." Section -0270 does not have a table and believe the anticipated table to be references in now Table X of 246-272A-0280.

-0260

- Under subsection (5)(c), recommend adding "an evaluation" or move under section (a). As written, it's missing a verb – what is the inspector supposed to do?

-0265

- Subsection (2) seems as though it could be consolidated in subsection (1).

-0270

- Subsection (1)(e) states "obtain an inspection, as required in WAC 246-272A-0260(5)…" This references section is not what "requires" the inspection; -0270 is. Section -0260 outlines what makes up an inspection. Consider replacing "required" with "outlined."

-0280

- Subsection (1)(a) references Table X which was previously Table IX. Table IX is now options for addressing OSS Failures but is not references until Subsection 3. Consider reorganizing the two tables so that the tables are in order of their reference and will maintain the contents of the "Treatment Component Performance Levels for Repair of OSS Not Meeting Vertical & Horizontal Separation" as Table IX.
- Subsection (4)(e) references 246-272A-0014 & -0016. These WACs DNE. Update the WAC reference to the correct section.

-0320

- Table XI. Ensure leading zeros are used (0.5 acres) and footnotes reference the correct subsection [-0234(7) now].
- Recommend clarifying with Office of Drinking on the definition of public versus nonpublic water systems and defining in 246-272A. EPA defines (Group A) public water systems and DOH Office of Drinking Water has defined Group B public water systems. Section (2)(b) states "with nonpublic wells", however, the wording of the WAC sounds as though a development/subdivision is creating a (privately-owned) public water system with multiple wells.

-0420

- Clarify subsection (2)(b). Highlight is the area of confusion along with strikeout recommended edits.
  (b) Upon review, if the department finds that the waivers previously granted are inconsistent~~, consistent~~ with the purposes of this chapter, and DS&G for granting waivers, the department shall provide technical assistance to the local health officer to correct the inconsistency, and may notify the local and state boards of health of the department's concerns.
- In subsection (4), recommend adding what timeframe the annual report will cover. Will it be of the calendar year or biennium?

-0430

- Subsection 2. Consider adding that each notice and order must "include the date in which the required repair must be completed (due date)".

Please let us know if you have any questions or concerns.

Sincerely,

Charese Gainor (she/her)

Drinking Water & On-Site Septic Lead

Skagit County Public Health – Environmental Health

301 Valley Mall Way STE 110 | Mount Vernon, WA 98273

Main: 360-416-1500 | Direct: 360-416-1563

CGainor@co.skagit.wa.us

246-272A-0340 Approval of installers, pumpers, and maintenance service providers (2)	**This would require non-Puget Sound counties that would not be mandated to do property transfer inspections until 2 years after implementation, to put an approval process for maintenance service providers in place 2 years in advance. Consider changing the requirement date for these counties to have an approval process for maintenance service providers in place closer to the implementation date, e.g., Jan 1, 2027.**