

October 22, 2020

**Subject: Q&A On-site Septic Systems on undersized lots**

Dear Ms. Moase and North Shore Planning Board,

Please find attached a summary of my recent correspondence with the province with regards to requirements and processes for approvals of on-site septic systems on undersized lots (i.e., for properties with less than the minimum lot area requirement as required in the provincial *PEI Sewage Disposal Systems Regulations*).

The attached document is formatted as a Q&A, the questions/answers are from email correspondence between myself and various officials with the province, including the Approvals/Regulatory Compliance Engineer (Dept. of Environment, Water and Climate Change), Manager of Drinking Water and Wastewater Management (Dept. of Environment, Water and Climate Change) and the Chief Safety Standards Officer (Department of Agriculture and Land). For the purpose of formatting a summary of their combined answers, I have removed irrelevant and/or duplicate text and I have highlighted in bold key findings. I have not otherwise altered or changed the answers received.

The intent of the Q&A is to provide clarification on questions relating to development approvals for services for undersized lots. I note the following as the most significant findings that should be taken into consideration by the municipality.

- The province has minimum lot area regulations for the design and installation of on-site sewerage systems, however they regularly approve on-site sewerage systems for existing properties that have less than the required lot area.
- The provincial regulations for the design of on-site sewerage systems for lots that are undersized and for larger lots are the same.
- It is common practice, but not required, for an engineer to be involved in the design of systems on lots under 5,000 sq ft (0.115 acres), with category 1 soil.
- The province provides training for licensed contractors, but the training material does not provide instructions on how undersized lots should be addressed.
- The province can issue variances to the setback requirements for on-site sewerage systems – generally kept within 10% - but they generally do not issue variances on setbacks to water wells.
- It is the licensed contractor's responsibility to identify the location of a well on an adjacent property, but currently there are no processes in place to confirm whether or not a well is located within the 50ft setback from a new system, unless it has been identified on the sketch site plan.
- Audits on on-site sewerage systems are done on an ad-hoc basis 'not as frequently as we'd like'.

As always, I look forward to our further discussions on this matter.

Best regards,  
Hope Parnham

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Q1. It is my understanding that "Licensed Septic Contractor/Assessors and Private Site Assessors are permitted to assess and select sewage disposal systems, up to a system size of 6,810 L/day (1,500 lgal/day) categorized as Category I, II, III (bedrock) & IV. The selection of systems up to five bedrooms (2,270 L/day) residential units can be selected from Table 1.1 and selection tables in Appendix D (Disposal Field Length Selection Table) once the soils of the area have been categorized."

Does this mean that Licensed Septic Contractor/Assessors and Private Site Assessors are also authorized to design and install on-site sewage disposal system (up to a system size of 6,810 L/day (1,500 lgal/day) categorized as Category I, II, III (bedrock) & IV) on lots that do not meet minimum lot area or circle diameter requirements under the Province-wide Minimum Development Standards? And if not them, who is authorized?

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A1. Site Assessors assess and categorize soils for systems up to 1500 IGPD. Contractors select and install septic systems up to 1500 IGPD. However, most contractors are also site assessors. **Yes, we do allow them to design systems for lots that do not meet today's lot size requirements.** The current lot sizes were adopted in 1993 so many lots prior to that, and there are thousands, would most likely not meet the larger lot sizes of today. We typically would **ask for an engineer to design the system if the lot was less than 5000 sq ft** of developable area as to fit all that is required on a site that small would require perhaps an alternative design.

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Q2. How are the regulations on the design and system types permitted, as outlined in the Minimum Regulatory Requirements for On-Site Sewage Disposal Systems on PEI (Schedule to the Sewage Disposal Systems Regulations), for on-site sewage disposal systems for a development on a lot that does not meet minimum lot area or circle diameter requirements (included in Appendix C of these requirements)?

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A2. The contractors do their best to ensure a septic system will fit on an undersized lot. **Typically, it is the same size septic system installed on lots that meet today's lot size standard** as on older, undersized lots. If this were not the case, many lots on PEI would not be able to be developed. As long as the setbacks from the property lines, buffer zones, roadways, structures, wells, etc. are met, we would allow a system to be installed. In extreme cases, we may even allow a holding tank as an alternative to a full sewage disposal system. As well, we can apply some variances if the lot is very small or irregular shaped. Section 13 of the EPA SDSR below:

13. Variances Notwithstanding the provisions of these regulations and the Standards affecting the design and location of a sewage disposal system, the Minister may vary those provisions where, because of existing lot size or other reasons, compliance is impossible, except that the variance with respect to setback from a well shall not be reduced by more than 10 per cent of the required distance. (EC625/13)

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**Q3. The design of a residential on-site sewage disposal system is currently based on a minimum of 900 L/day (720 for low flow) as well as the number of bedrooms in the dwelling, or the number of bedrooms in each of the units in the case of multi-unit residential properties. Are there any leniencies or variances granted to these minimum design flows for the development of a cottage, as a seasonal use property?**

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A3. No, this was removed years ago. **Two bedroom is minimum.** As well, there can be reductions based on low flow fixtures and some types of septic systems require less area for installation (leaching chamber, EZ Flow)

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**Q4. The minimum separation distances required for on-site disposal fields are described as follows:**

The on-site disposal field shall not be located:

- where, at any time, the maximum water table is less than 0.6 m (2 ft) below the ground surface in soil which does not meet the definition of permeable soil;
- in any area which may be subject to flooding either by a natural body of water or by surface water runoff;
- under a roadway;
- under a paved area;
- under an area used by motor vehicles;
- under an area used intensively by livestock;
- less than 6.1 m (20 ft) from a foundation; (this is intended for open foundation)
- less than 3.0 m (10 ft) from a parcel boundary or an embankment;
- less than 15.2 m (50 ft) from any well; or
- Less than 15.2 m (50 ft) from a natural boundary of a body of water.

**4a. Are there any circumstances where variances or leniencies to these setback requirements are granted when a lot does not meet the minimum lot area or circle diameter requirements of the Province-wide Minimum Development Standards?**

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A4a. Typically, **no variance to a well unless under an extreme situation.** We do try to stay within a 10% variance margin for some side or front lot boundaries, but typically, we will not vary for setbacks to a foundation or buffer.

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**Q4b. In the above list of minimum separation distances, is the location of existing wells on adjacent properties required on the site plans submitted? If so, who is responsible for identifying the well location?**

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A4b. The **engineer/contractor is responsible to ensure the minimum 50 foot setback to all wells.** Any wells that are close to this setback should be shown on the application sketch.

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**Q4c. In the above list of minimum separation distances, is coastal flood risk due to storm surge considered in the exclusion of "any area which may be subject to flooding either by a natural body of water or by surface water runoff"? And if so, what probability of flood risk is considered (i.e. current day 1% or 1-in-100 yr event? Who identifies the flood risk?**

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A4c. Currently, there is very little consideration given to flood risk as often, that information is not readily available to the contractors

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Q4d. In the above list of minimum separation distances, who is authorized to delineate a natural boundary of a body of water adjacent to a wetland?

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A4d. Department of Environment, Water and Climate Change employees.

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Q5. In Appendix D (Disposal Field Length Selection Table) of the Minimum Regulatory Requirements for On-Site Sewage Disposal Systems on PEI, the disposal field length requirements are based on the soil category of the lot and the number of bedrooms in the dwelling. Do these tables also apply to field length requirements on existing lots that do not meet the lot area and/or circle diameter requirements?

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A5. Yes they do.

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Q6. Does the registration form for a site suitability assessment or on-site sewage disposal system, require the Site assessor to disclose any information with regards to the lot area of the property in question, and/or it's conformance with the Province-wide Minimum Development Standards?

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Q6. The lot area, size and shape must be shown on the **sketch** but no, not much information with any sort of conformance with the PWMDS

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Q7. I understand that both licensed contractors and professional engineers are authorized to sign the Certificate of Compliance on the installation of an on-site sewage disposal system. Is a licensed contractor expected or required to carry professional liability insurance with respect to signing off on these certificates (professional liability insurance would be standard for a professional engineer)?

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A7. No, we **do not require contractors to carry liability or errors and omissions insurance** under regulation or as a policy.

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Q8. Where the Sewage Disposal System Installation and Assessment Audit Report is signed by a provincial Safety Standards Officer, is it your understanding that the province is ultimately responsible for whether or not the system is designed/installed in accordance with the regulations? And if so, can the municipality be held responsible for any issues that may result from an on-site sewage system installed on an undersized lot that results in contamination of nearby water wells, or other negative impacts to adjacent properties? (Note that I understand this is probably a legal question, but if you are familiar with any past cases that have been challenged against a municipality that were dismissed, that would be sufficient information).

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A8. Certainly a legal question but there have been past cases where the Province had been held at least partly liable for our involvement in audits or inspections but again, not much of that happens today as **the contractor is responsible for the design and installation and audits or inspections are not done as often as we'd like.**

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**Q9. Are you aware of any other areas in PEI that that would compare to that of the Stanhope Peninsula, with regards to its high-density development capacity of existing undersized lots (not just the existing dwellings but potential for full-build out under current regulations), and that which is also NOT serviced by either central water or central waste treatment systems?**

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A9. Well, I suggest **this may be the largest area in the province where there are undersized lots that are not serviced with water and wastewater.** This area has extensive studies looking at servicing, in the past. These studies have provided some direction on the community's vulnerabilities with respect to undersized lots. They have also provided the community with valuable direction to consider.

There are numerous older subdivisions all around PEI that have not been fully built out which could be similar to Stanhope. There are some in Desable, Hampton, Cape Traverse, Souris West, Cable Head, Greenwich, Kildare Capes, Tyne Valley, Lakeside, West St. Peters. They may not all be at the exact scale of Stanhope but some are big potential developments.

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**Q10. Is there any further information that you would like to share with the municipality with regards to how the province handles development applications on undersized lots.**

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A10. This is, and has been, an ongoing issue for years as many of the 'good lots' are now developed. **This leaves the older, smaller, not so desirable lots that pose many challenges for development.** We do our best to accommodate as many of these as we can but in reality, some of these undersized lots are just too small and therefore, we cannot allow development to occur. We do our best with issuing setback variances and often ask for complete and certified surveys showing the lot boundaries and the location exactly of all proposed and existing structures, septic systems, wells, buffers, driveways, etc. so we know exactly what we have to work with. **It would be beneficial if one day we could settle on a lot size that is just too small for development and instantly deny development prior to initiating any additional time consuming evaluations - perhaps something like less than 5000 square feet.**

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**Q11. One follow-up question if you don't mind, you mentioned a 5,000 sq ft minimum lot area is currently the benchmark for when you require an engineer to be involved in the design of the system. This lot area is 1/5 that of the required lot area for a single dwelling unit on a lot with category 1 soil. If the proposed development was for more than a single unit (2-units, or a single unit with an attached secondary suite), or if the development was for a lot with category 2 or 3 soil, would the benchmark for requiring an engineer still be 5,000 sq ft? or would you require the engineer at a larger lot size (i.e., 1/5 of the 35,000 sq ft for category 2 soil)?**

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Q11. Yes, the 5000 square feet would be just for a single unit dwelling (cottage). **Typically, the Regulations do not allow duplexes or multi-unit dwellings using private road or commercial/industrial development.** If the parcel was Cat 2, 3 or 4, then yes, we may request they hire an engineer or reject development of any kind unless they can somehow make the lot bigger, but again, there is no regulatory requirement for this, just trying to do our best with what we have.

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**Q12. With regards to Sewage Disposal System Installation and Assessment Audit Reports, you had mentioned that the inspections are not done as frequently as you would like. I am wondering under what circumstances are these inspections done. Does a property owner have the option to request an inspection? Does a municipality have the option to request an inspection? And, when an inspection is done, does anyone look at the adjacent properties to confirm whether or not there is a well within the minimum setback distance?**

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A12. Typically, we would like to perform a minimum of 10% of installations done by each contractor and more if mistakes are found. As well, for systems that require good quality fill to be installed, we would prefer to audit those systems as well to ensure the system is installed in the proper amount of fill.

For systems installed on smaller lots or in not so favorable conditions, we would also like to inspect those as well. The issue is simply, manpower. **We do not have enough staff to dedicate to all that is required to perform these audits/inspections.** We certainly wish we could do more but the reality is, our planning and development files are becoming more and more complicated and most of our time is spent on those.

I do not typically see many property owners requesting inspections, in fact, maybe a handful in the last 15 years, so it's not something we see all the time. I guess as a municipality you could request whatever you feel is necessary but who would be doing the inspections? Right now, that is still our staff's responsibility and as previously stated, manpower and time are major issues with performing these inspections. **This is a much larger conversation to have with many Government officials. It's not just a municipal issue as we are aware that we need to have the opportunity to do more with these inspections and hopefully, we can find a viable solution in the near future.**

Yes, if an audit is performed, we do our best to address any nearby wells and note that on our inspection report.

Note that we have the ability to audit contractors and site assessors, but we are not performing inspections???. During the development of the program for on-site we used a couple of levels for audits, ie desk top, basic field audit, and detailed audits. All require different levels of effort.

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**Q13. Typically, when a municipality has a central water service, the municipality owns the service within the public right-of-way and to the property line and individual property owners are then responsible for connecting to the service within their property. In your experience, in areas that are serviced by private roads, would the municipality run the services down the private roads to each of the lots as well, or would the extension of the service from the public right-of-way down the private road be the responsibility of the owner of the private road?**

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Well, this is not something we see very often, hardly at all, but my opinion would be **it would be the responsibility of the right of way owner in this case.** Anything that happens in a subdivision served by a private road is usually the responsibility of the right of way owner(s)... like utilities, maintenance, snow clearing, etc. **In some cases, the lot owners would form a home owners association to oversee all that is required in a subdivision served by a private road.** There are many subdivisions of this nature that have central water service which is typically the responsibility of the right of way/open space owners.

If the municipality is constructing the system, they should work with land owners of the area to develop appropriate rights to perform maintenance on the system. This typically **includes developing easements to ensure proper maintenance can be completed on the system up to the property lines by the municipality.** This is certainly the way the department would like to see the construction of the system be done.

<The following answer was provided by IRAC, October 20, 2020>

Should a central municipal system be created, IRAC would have authority over construction, rate setting and general operations and the Commission regulates both municipal and privately-owned utilities.

In cases of **central systems established within privately-owned developments, the infrastructure is typically the responsibility of each owner and managed by a homeowners' association or owner.** All services usually get lumped into one fee – ie grass cutting, road maintenance and water – and IRAC typically doesn't get involved, unless we are asked to by the Owner or there are chronic problems.

**If a municipal utility installs or extends new central services that go through a privately-owned road, then easements are necessary to ensure that access and ownership of the pipes and equipment remain with the municipal utility.** The municipal utility owns and operates the central water/sewer system and is responsible for the infrastructure on private land with easements in place, and has the same responsibilities and oversight that exist with public right-of-way installations.

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**Our primary concern is that sewerage systems are being installed on under-sized lots and that the majority of the site plans submitted do not show a well on the adjacent lots. How would you suggest we work within the current system of processing approvals (for development permits and sewerage systems) to confirm that the location of the well was determined in the preparation of the site plan? We had previously thought the sewerage audit would locate these wells, but it doesn't sound like that is the case. How can we find out if there is in fact no well on the adjacent lot within the required setback distances, vs whether the location of the well was overlooked in the preparation of the plan?**

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tough question....**there is certainly nothing in any data base that would assist with this,**... that **information on the presence or absence of wells on adjacent lots within the setback distance needs to be on the site plan, and to place the onus on the proponent** could there be a place where they sign off on the fact that the information on the plan including such information is in fact complete?

The only other crazy screening tool I can think of would be to have the distance to the nearest building on adjacent properties be shown on the plan, with the assumption (normally true) that the well will be within 10-15 feet of the foundation....in which case perhaps of setback of something like 65 feet from a building on an adjacent lot could be used in the absence of information on wells on adjacent properties?