CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

April 23, 2007 **BY FAX**

Ms. Naomi Herold
Policy Analyst, Water Policy Branch
Ministry of the Environment
135 St. Clair Avenue West, 6th Floor
Toronto, Ontario
M4V 1P5

Dear Ms. Herold:

RE: PROPOSED AMENDMENTS TO REGULATION 903 (WELLS)
EBR REGISTRY NOTICE NO. 010-0098

We are writing to provide the comments of the Canadian Environmental Law Association (CELA) with respect to the Ministry of the Environment's (MOE) recently proposed amendments to Regulation 903. These comments are being provided to you in accordance with the above-noted EBR Registry Notice.

At the outset, we commend the MOE for finally beginning to make some tangible (albeit limited) progress in pursuing long overdue reforms to the Regulation 903 regime. At the same time, however, we must express our concern about the compressed nature of this 32 day EBR comment period on matters that profoundly affect public safety and environmental health. Indeed, given that CELA and other stakeholders have been raising Regulation 903 issues for the past four years, it is unclear why the MOE is just now soliciting public comments over an approximate four week timeframe (and, coincidentally, mere months before the next provincial election).

More importantly, for the reasons outlined below, it is CELA's overall conclusion that while some of the proposed reforms may improve the clarity, effectiveness, and enforceability of Regulation 903, many other proposed reforms will not achieve these important objectives and must therefore be reconsidered and/or revised forthwith. In addition, there are a number of key legal, technical and implementation issues that remain largely or completely unaddressed by the reforms being proposed by the MOE at the present time.

Accordingly, CELA hereby makes the following recommendations in relation to the proposed amendments to Regulation 903:

RECOMMENDATION #1: The MOE must immediately rehire full-time, dedicated well inspectors to respond to well-related complaints, and to conduct announced and unannounced well inspections under Regulation 903. The MOE's inspection and

enforcement program for Regulation 903 must receive adequate technical resources, appropriate policy direction, and sufficient fiscal support in order to be fully functional and effective in protecting the environment and public health.

RECOMMENDATION #2: The persons contracted by MOE to draft the technical guide for Regulation 903 must be expressly required to consult with interested stakeholders, including environmental groups, industry or professional associations, municipalities, health unit representatives, MOE staff, and other provincial ministries. Upon receipt of the draft technical guide, the MOE should post it on the EBR Registry and use other appropriate means to solicit public/agency input before the guide is finalized and promulgated by MOE.

CELA RECOMMENDATION #3: Proposed section 1 should include definitions of "free chlorine residual", "natural gas or other gas", "contaminated site", "sources of pollution", and other key words and phrases used within Regulation 903.

CELA RECOMMENDATION #4: The MOE should reconsider the proposed wholesale exemption of "ponds" from the OWRA and Regulation 903. If it is appropriate to exempt certain types of ponds, then Regulation 903 should qualify the partial exemption with definitions, conditions or constraints which ensure that exempted ponds do not pose environmental or health risks.

CELA RECOMMENDATION #5: The MOE should reconsider the existing exemption in section 1.1 for shallow test holes and dewatering wells or, alternatively, should develop some key definitions and greater prescriptive detail regarding shallow test holes and dewatering wells.

CELA RECOMMENDATION #6: The MOE should immediately review and revise the separation distances mandated by subsections 12(1), (2) and (3) of Regulation 903. As an alternative to fixed separation distances, consideration should be given to imposing a general duty upon well constructors to use all reasonable care to prevent new wells from being sited in locations where the wellwater may be impaired from on-site or off-site sources of contaminants. In the further alternative, consideration should be given to establishing a permitting system for certain classes of wells (i.e. those intended for drinking water purposes) so that proposed well locations would have to be reviewed and approved by MOE inspectors before the well is constructed.

CELA RECOMMENDATION #7: The MOE should review and revise the current definition of sealant (and related terms), and should develop performance-based standards that mandate the use of appropriate and effective sealing materials as may be warranted in the site-specific circumstances of the newly constructed well.

CELA RECOMMENDATION #8: Proposed section 15 must be amended to expressly require the well constructor to ensure that at least one post-treatment bacteriological test is undertaken to determine whether Total Coliforms or *E. coli* are present. If these organisms are detected, then the well contractor should re-treat and re-test the well. If

Total Coliforms or E. coli persist after re-treatment, then the well owner should solicit and act upon the advice of the local medical officer of health in order to ensure potable drinking water. If potability cannot be achieved, then the well should be promptly and appropriately decommissioned by the well owner.

CELA RECOMMENDATION #9: Proposed section 15 should include provisions similar to AWWA C654 in order to require well contractors to take all reasonable care to ensure that chlorinated wellwater is not pumped out in a quantity, concentration, or under conditions that may impair the quality of surface water or groundwater, or that cause, or are likely to cause, adverse effects within the meaning of the *Environmental Protection Act.*

CELA RECOMMENDATION #10: The MOE should reconsider and revise proposed amendments to section 21 to ensure that well contractors are obliged to undertake appropriate field testing for potentially dangerous gases in order to determine whether well abandonment steps (or corrective measures) are required. This revision should prescribe the threshold concentrations of gases that will trigger abandonment steps or corrective measures.

CELA RECOMMENDATION #11: Before proposed section 21(5) comes into force, the MOE should undertake an effective, multi-media public outreach program across Ontario to advise private well owners to have their wellwater tested for drinking water parameters under current potability standards, particularly if their wells have been constructed since 2003. The MOE's public outreach program should also provide adequate information about the forthcoming obligation under Regulation 903 to either abandon non-potable wells or solicit and follow the advice of the local medical officer of health.

If the MOE accepts the foregoing recommendations to review and revise certain proposed amendments to Regulation 903, then it goes without saying that any further proposals for regulatory reform should be preceded by meaningful opportunities for stakeholder input and posting on the EBR Registry for wider public and agency comment.

PART I – BACKGROUND

Since its inception in 1970, CELA has been actively involved in casework and law reform activities aimed at protecting the quality and quantity of groundwater resources, particularly where such resources are being used for drinking water purposes. In recent years, for example, CELA has:

- represented Walkerton residents at Parts 1 and 2 of the Walkerton Inquiry;

- made numerous submissions in relation to drinking water statutes and regulations passed by Ontario in the wake of the Walkerton Tragedy (i.e. *Safe Drinking Water Act*, *Clean Water Act*, etc.); and

- participated as a member of various provincial advisory bodies in relation to source water protection, water takings, nutrient management, and related matters.

As part of its water campaign, CELA has focused upon the efficacy of regulatory standards under Regulation 903. In October 2003, for example, CELA applied under Part IV of the *Environmental Bill of Rights* (EBR) for a review of Regulation 903, as amended by O.Reg.128/03. Among other things, CELA's EBR Application identified serious shortcomings within Regulation 903 and proposed certain changes to Regulation 903 in order to: (i) better protect the environment and public health; (ii) conform with the MOE's *Statement of Environmental Values* (SEV) under the EBR; and (iii) ensure consistency with Mr. Justice O'Connor's recommendations from the Walkerton Inquiry recommendations.[1] The key Walkerton recommendations relied upon by CELA include the following:

> RECOMMENDATION 74: The Ministry of the Environment should increase its commitment to the use of mandatory abatement.
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> RECOMMENDATION 75: The Ministry of the Environment should increase its commitment to strict enforcement of all regulations and provisions related to the safety of drinking water.
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> RECOMMENDATION 78: The provincial government should ensure that programs relating to the safety of drinking water are adequately funded.
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> RECOMMENDATION 86: With regard to private drinking water systems that are not covered by either Ontario Regulation 459/00 or Ontario Regulation 505/01, the provincial government should provide the public with information about how to supply water safely and should ensure this information is well distributed. It should also maintain the system of licencing well drillers and ensure the easy availability of microbiological testing, including testing for *E. coli*.[2]

In March 2004, the MOE advised CELA in writing that the requested review of Regulation would not be undertaken. Among other things, this MOE response (which was delivered two months after the prescribed EBR deadline) claimed that Regulation 903 reflected "best practices" and "best available science", and that the 2003 amendments to Regulation 903 would greatly enhance the safety of groundwater drinking supplies across the province.

In May 2004, CELA filed a detailed rebuttal of the MOE's refusal to review Regulation 903.[3] In addition, CELA staff met and corresponded with various MOE officials to discuss CELA's outstanding concerns about Regulation 903, and to advocate long overdue reforms to the Regulation 903 regime. CELA also provided its views to the Environmental Commissioner of Ontario (ECO), who was sharply critical of the MOE's intransigence on this issue (see below).

The continuing public controversy over the inadequacy of Regulation 903 prompted the Minister of the Environment, in part, to refer the issue of well disinfection to the expert members of the Ontario Drinking Water Advisory Council (ODWAC) in June 2004. In the following months,

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[1] CELA's EBR Application is available at: www.cela.ca.
[2] Part 2 Report of the Walkerton Inquiry (2002), pages 29 to 31.
[3] CELA's rebuttal to the MOE response is available at: www.cela.ca.

the ODWAC received submissions from MOE and CELA regarding disinfection, and conducted its own research into this matter.

In June 2005, the ODWAC provided the Minister with an advice letter which confirmed CELA's view that Regulation 903's disinfection standard was "deficient" for various reasons.[4] The ODWAC also recommended the adoption of a prescriptive five-step procedure for ensuring the proper disinfection of new and existing wells, as discussed below. However, the ODWAC advice letter was not made public by the MOE for approximately 1 ½ years, nor was ODWAC's expert advice adopted or acted upon by MOE during this timeframe. In the meantime, literally thousands of new wells were drilled and presumably treated across Ontario in accordance with the current disinfection standard which the ODWAC had found to be "deficient".

While these developments were underway, the ECO has been closely monitoring and critically reporting upon the MOE's continuing refusal to rectify the serious problems within the Regulation 903 regime. For example, in the 2003/04 Annual Report, the ECO concluded that:

> The well regulation should require best construction practices, as recommended by Mr. Justice O'Connor. However, concerns have been raised (for example, through an EBR application...) that the new well regulation, as currently drafted, does not meet those intentions, especially with respect to private domestic wells. For instance, there are concerns that the regulation does not require well constructors to verify, through water testing, that new wells have indeed been disinfected. Nor is there a requirement that well contractors disinfect private wells after carrying out repairs...
>
> It appears that to make the new regulation a truly effective tool for drinking water protection, the ministry should correct a number of technical deficiencies, clarify language to reflect on-the-ground practices, and think through the various enforcement challenges that need resolution in order to meet the intentions of Mr. Justice O'Connor...
>
> RECOMMENDATION 11: The ECO recommends that MOE ensure that key provisions of the Wells Regulation are clear and enforceable, and that the ministry provide a plain language guide to the regulation for well installers and other practitioners.[5]

In the 2004/05 Annual Report, the ECO lamented the MOE's general lack of progress and cooperation regarding the need to reform Regulation 903:

> The ECO recommended that MOE ensure that key provisions of the Wells Regulation are clear and enforceable and that the ministry produce a plain language guide to the regulation. MOE indicated that it is undertaking education efforts of both well owners and well technicians, and that it has updated some brochures. However, MOE did not report that it had resolved some of the fundamental enforcement difficulties posed by the language of the regulation, nor has it released either a plain-language guide for well owners and the public or a comprehensive technical guide for the wells industry...

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[4] Letter dated June 16, 2005 from ODWAC to Environment Minister Leona Dombroswky. This letter is now publicly available at: www.odwac.gov.on.ca.

[5] ECO 2003/04 Annual Report, page 113. Available at www.eco.on.ca.

> On another project, the ministry's cooperation was less forthcoming. While the ECO was analyzing an application for review concerning amendments proposed to Regulation 903 R.R.O. (water wells), and reviewing an MOE decision on amending this regulation, we became aware of a ministry internal report that provided a critical appraisal of the proposed changes in practice. When the ECO made a request to the ministry for a copy of this report, the ministry chose not to provide the requested report, but suggested a meeting instead. Although the ECO appreciated the meeting, had the ministry instead provided the report, it would have assisted the applicants, the ECO, and the general public to gain a better understanding of the technical issues surrounding water well installation and maintenance.[6]

Most recently, in the 2005/06 Annual Report, the ECO noted that:

> The ECO has repeatedly raised concerns to MOE and received assurances, both in person and in writing, that processes are underway to address the issues...
>
> However, as of spring 2006, the ECO has seen no action to fix a severely flawed regulation that endangers public health and impedes environmental protection...
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> Since the revised Wells Regulation came into effect in 2003, tens of thousands of wells have been constructed, repaired or abandoned under a regulation that is widely seen as inadequate, with little enforcement or oversight from MOE. The ministry is neglecting its obligations to those whose drinking water comes from the most vulnerable of sources: small private wells. The regulation is also impeding groundwater monitoring at a time when Ontario most needs environmental monitoring to support source water protection.
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> Despite recent promises to amend the regulation and provide guidance to the industry, MOE continues to delay. The ECO is concerned that the ministry, having shed much of its water well staff, now lacks the technical capacity and field experience to design a regulation that works for Ontario's many types of water wells.
>
> The ECO is very disappointed that MOE has shown itself unable or unwilling to resolve widespread and well-founded concerns about a regulation that is so vital to Ontario's environmental protection and drinking water safety (emphasis added).[7]

In the face of such criticism (and despite repeated MOE assurances that Regulation 903 was fine as is), last month the MOE finally proposed various amendments to virtually every aspect of Regulation 903. Among other things, the proposed amendments address matters such as: definitions; exemptions; licencing; documentation; well casing; test holes; annular space; well completion; disinfection; venting; equipment installation; well maintenance; and "abandonment".

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[6] ECO 2004/05 Annual Report, pages 167, 175. Available at www.eco.on.ca.
[7] ECO 2005/06 Annual Report, pages 53-54. Available at www.eco.on.ca.

With the above-noted background and commentary in mind, CELA has carefully considered the proposed amendments now being put forward by the MOE. We have also considered the MOE's *Guide Describing Proposed Amendments to Wells Regulation 903 (March 2007)*, as well as information obtained by CELA during a briefing by senior MOE staff on April 13, 2007. Our general and specific comments about the MOE's proposed reforms are set out below.

PART II – GENERAL COMMENTS

CELA's general comments about the proposed Regulation 903 reforms fall into three main categories:

(a) inordinate delay by MOE in bringing these amendments forward;

(b) continuing concerns about the MOE's institutional ability to conduct inspections and enforce Regulation 903 standards in a timely and effective manner; and

(c) ongoing absence of the long-promised technical guide to Regulation 903.

(a) Unjustifiable Delay by MOE

CELA would be remiss if we did not briefly comment upon the dilatory manner in which the MOE has responded to serious, longstanding concerns about the inadequacy of the Regulation 903 regime. These concerns have been known to the MOE since at least 2003, and they have been repeatedly raised by CELA, other stakeholders,[8] and independent commentators such as the ECO and ODWAC. Nevertheless, the MOE has inexplicably dragged its heels in acting upon such concerns. Indeed, the MOE has apparently preferred to publicly defend the *status quo*, dispute the issues raised by CELA, and deny that Regulation 903 required further changes.

In particular, after refusing CELA's EBR Application for specious reasons, the MOE continued to make a number of grandiose and unsubstantiated claims about Regulation 903. In April 2005, for example, the Deputy Minister of the Environment claimed in testimony before a legislative committee that the Regulation 903 standards "now match or exceed other leading jurisdictions in North America."[9] Similarly, the Minister of the Environment claimed in September 2005 that the current disinfection standard "reflects a continent-wide industry standard set by the American Water Works Association."[10] Such claims are completely unsupportable since the AWWA standards require a number of important steps (i.e. post-treatment verification and re-treatment if necessary) that are not required under Ontario's current disinfection standard (and are still not required under the MOE's proposed amendments, as discussed below).[11] It should be further noted that the Minister's claims about Regulation 903 were made at a time when the Minister was in possession of the ODWAC's opinion that the current disinfection standard was "deficient", but the ODWAC advice letter was not publicly released until March 2007.

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[8] See, for example, *Water Well Sustainability in Ontario: Expert Panel Report* (January 30, 2006).
[9] Deputy Environment Minister Virginia West, Standing Committee on Public Accounts (*Hansard*, April 7, 2005).
[10] Environment Minister Laurel Broten, "Wells are Priority", *Peterborough Examiner* (September 30, 2005), page A4.
[11] See, for example, ANSI/AWWA A100/97 and ANSI/AWWA C654-03.

Without belabouring this point, CELA simply observes that it is highly unfortunate that since 2003, the MOE has largely attempted to defend – rather than fix – Regulation 903. In 2007, however, the MOE has suddenly changed its tune and is now proposing to rewrite a regulation that it had previously described as one of the toughest in North America. While we are pleased to see the MOE's new-found interest in reforming Regulation 903, we are disappointed that the MOE's previous (and ill-advised) defence of Regulation 903 has literally squandered years' worth of opportunities to remedy the numerous deficiencies within Regulation 903. Indeed, it appears that MOE has, in fact, carried out a review of Regulation 903 despite publicly refusing CELA's EBR Application for Review.

In any event, had the MOE responded in a more timely and productive manner to stakeholder concerns and recommendations from the ECO and ODWAC, the much-needed reforms to Regulation 903 would likely have been proposed, finetuned, and implemented long before now. In the circumstances, CELA can only conclude that the MOE's delay has been unjustifiable and contrary to the public interest.

(b) Enforcement of Regulation 903

Leaving aside the content of the proposed amendments to Regulation 903 (see below), CELA remains gravely concerned about capability and willingness of the MOE to actually undertake appropriate investigation and enforcement measures to ensure compliance with Regulation 903.

In 2003, CELA's EBR Application for Review framed the enforcement issue as follows:

> The applicants' concerns about the numerous deficiencies within Regulation 903 are compounded by recent developments regarding the Ministry's ability to enforce the Regulation in an effective and timely manner.
>
> In the past, for example, the MOE had a specialized five person team of full-time well inspectors who responded to public complaints and conducted unscheduled inspections of new well construction. In addition, the MOE had a chief well inspection official to oversee such matters. However, this position no longer exists, full-time well inspectors no longer exist, and unscheduled inspections of wells no longer occur in Ontario.
>
> The net result is that the Ontario government essentially relies upon well contractors to install wells properly and in accordance with the standards prescribed by Regulation 903. Given the paramountcy of protecting the environment and public health against improper well construction practices, the applicants submit that "self-regulation" by contractors is completely unacceptable and unsupportable.[12]

Similarly, CELA's 2004 rebuttal to the MOE reply elaborated upon our various enforcement concerns, and concluded that:

[12] CELA EBR Application for Review, page 13.

> In summary, the provisions of Regulation 903 are undoubtedly intended to serve as a critical upfront safeguard in Ontario's wells management program and the "multi-barrier approach" to ensuring drinking water safety. In other words, the minimum standards set out in the Regulation are intended to prevent health or environmental risks from materializing in the first place. This is why the MOE must be proactive – not reactive – in its inspection policies and procedures, and must be adequately funded to carry out this important task. Thus, it is unacceptable for the MOE reply (and the Operations Division Delivery Strategy) to restrict inspection activities to public complaints involving actual health or environmental impacts.[13]

However, based upon our recent briefing by MOE staff, it is CELA's understanding that the MOE still does not intend to re-hire the five full-time well inspectors or reinstate the position of chief well inspection official. Instead, the MOE still intends to utilize existing provincial officers (who may or may not have adequate well-related training and knowledge) to conduct investigations, but only where significant public complaints are received (i.e. involving health or environmental impacts). We were further advised during our briefing that the MOE may, in its discretion (and as available resources permit), elect in the future to conduct regional "blitzes" to assess the level of compliance with Regulation 903.

In CELA's view, the MOE's *laissez-faire* approach is completely unacceptable and totally inconsistent with the above-noted Walkerton Inquiry recommendations regarding strict enforcement (including unannounced inspections) and "zero tolerance" of non-compliance with regulatory requirements regarding drinking water.

In relation to the MOE's much-hyped 2006 enforcement blitz, it is our understanding that while a high rate of contractor compliance was reported, the blitz itself: (a) did not include random or unannounced inspections; (b) targeted only selected persons who were listed within the MOE database, and who were told in advance about the forthcoming inspections; (c) did not attempt to assess the level of compliance by unlicenced persons performing well-related work (i.e. excavation, pump installation, etc.); (d) focused largely on "paper-work" (i.e. well records) and visual observations in and around the top of the well, but did not involve substantive well inspections to depth (i.e. video inspection); (e) only involved drilled wells; (f) did not address test holes drilled for geotechnical or environmental purposes; and (g) detected numerous violations of air vent requirements under section 18(1)(c) of Regulation 903 (i.e. air vents must be above the well cap in drilled wells)[14], but violators were quietly given additional time by the MOE to rectify the problems. Thus, there is nothing in the 2006 blitz that proves non-compliance is a non-issue across Ontario, and CELA takes no comfort in the MOE's unpersuasive assurance that similar blitzes may be possible in the future.

In our view, ensuring full compliance with Regulation 903 is of paramount importance, and enforcement of Regulation's standards intended to protect public resources and public health must remain in public hands. Accordingly, CELA strongly opposes any attempt by the MOE to download investigation/enforcement powers and duties to municipal officials or industry

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[13] Response of CELA to the Reply of the MOE re: EBR Application for Review of Regulation 903 (Wells) (May 14, 2004), page 35.

[14] CELA is aware that the MOE is now proposing to change this requirement in new section 15.1.

associations. At all material times, the MOE must remain empowered, capable and accountable for ensuring compliance with Regulation 903. In our view, this objective would effectively and efficiently achieved by restoring the specialized, full-time well inspectors in each of the MOE's administrative regions, and by ensuring that such inspectors are properly resourced.

RECOMMENDATION #1: The MOE must immediately rehire full-time, dedicated well inspectors to respond to well-related complaints, and to conduct announced and unannounced well inspections under Regulation 903. The MOE's inspection and enforcement program for Regulation 903 must receive adequate technical resources, appropriate policy direction, and sufficient fiscal support in order to be fully functional and effective in protecting the environment and public health.

(c) Technical Guide to Regulation 903

For literally years, the MOE has been promising to publish a much-needed technical guide to assist members of the wells industry to understand and comply with their obligations under Regulation 903 and the overall legislative framework. To date, however, this technical guide has not been published by MOE.

CELA first commented upon the absence of the technical guide in our 2003 EBR Application for Review:

> The applicants further submit that this lamentable "self-regulation" approach is exacerbated by the lack of adequate training or technical packages. To date, the Ontario government has not finalized nor distributed any information to the well construction industry about Regulation 903 or how to meet the new technical standards. Given the diminished governmental capacity to inspect wells, and given that industry has not yet been fully apprised of how to comply with the new Regulation 903 requirements, the applicants submit that wellwater safety is clearly at risk across Ontario.[15]

Similar concern was raised by the ECO in his most recent annual report:

> In August 2003, MOE announced that it was "in the process of providing every licenced well contractor and technician in the province with a comprehensive guide to the amended regulation." MOE has reiterated that promise ever since, in response to criticism and questions, but has not followed through...
>
> From an enforcement perspective, uncertainties in interpretation of the regulation and the long delay in providing a promised guidance manual to well contractors might make it difficult for MOE to successfully prosecute violations of the Wells Regulation.[16]

Based on our recent briefing by MOE staff, CELA understands that the MOE still intends to proceed with the technical guide to Regulation 903. However, it appears that this critically important initiative has again been stalled pending the outcome of the proposed amendments to

[15] CELA EBR Application for Review, page 14.
[16] ECO 2005/06 Annual Report, page 52.

Regulation 903. We further understand that the initial drafting of the technical guide has been contracted out by the MOE to Sir Sanford Fleming College, but we remain unclear on the timelines, content requirements, or methodology for producing the draft guide.

Given the longstanding involvement of CELA and other stakeholders in the matters to be addressed by the guide, we would strongly recommend that the College contractors be expressly directed by MOE to proactively solicit input from groups, associations and entities interested in, or affected by, the standards set out in Regulation 903. It goes without saying that the guide should reflect "best available science" and "best construction practices" utilized in leading North American jurisdictions.

In addition, once the initial drafting has been completed, the MOE should web-post the draft guide on the EBR Registry to solicit wider public/agency input into the guide before it is formally adopted and promulgated by MOE.

RECOMMENDATION #2: The persons contracted by MOE to draft the technical guide for Regulation 903 must be expressly required to consult with interested stakeholders, including environmental groups, industry or professional associations, municipalities, health unit representatives, MOE staff, and other provincial ministries. Upon receipt of the draft technical guide, the MOE should post it on the EBR Registry and use other appropriate means to solicit public/agency input before the guide is finalized and promulgated by MOE.

During our recent briefing with MOE staff, CELA was advised that many of our concerns could be addressed with appropriate language in the text of the forthcoming guide. CELA finds this response generally unsatisfactory because the guide, in and of itself, is not legally enforceable. In our view, sufficiently prescriptive and comprehensive standards must be entrenched within the Regulation itself. The overall purpose of the guide is to explain what the standards mean in plain language, and to describe what steps should be to undertaken to ensure compliance with Regulation 903. In short, all necessary "best practice" standards should be set out in Regulation 903, not "buried" in an unenforceable guide.

PART III – SPECIFIC COMMENTS

CELA has numerous comments and concerns in relation to many aspects of the MOE's proposed amendments to Regulation 903. However, due to the relative brevity of the EBR comment period, CELA is unable at the present time to provide its views on the full suite of proposed regulatory changes. We are unaware whether the MOE offered other stakeholders a "sneak preview" of any of the proposed amendments (i.e. revised disinfection requirements) before they were publicly released, but the first time we saw the proposals was when they were posted on the EBR Registry a few weeks ago. It goes without saying that it would have been extremely helpful if the MOE had provided additional time – or a longer EBR comment period – for CELA and other stakeholders to review and respond to the proposed amendments.

In any event, CELA has decided to focus this submission on what we regard as high-priority matters, and we hereby reserve the right to file supplementary submissions with the MOE in the near future on residual matters not addressed in this brief.

In our view, the high-priority matters arising from the MOE's proposed reform of Regulation 903 are as follows:

(a) definitions;

(b) exemptions;

(c) siting requirements;

(d) sealant and annular space;

(e) disinfection;

(f) abandonment and corrective measures.

Each of these matters is discussed below in more detail.

(a) Definitions

A number of provisions within the MOE's proposed reform of Regulation 903 impose testing and other requirements in relation to various matters, but, in some cases, the reforms fail to include appropriate definitions. For example, although new section 15 imposes an obligation to test free chlorine residual concentrations, no definition of "free chlorine residual" is actually provided in Regulation 903. Similarly, new section 21 imposes certain obligations if a well contains "natural gas or other gas", but Regulation 903 fails to define what is meant by this phrase.

In addition, existing section 1.1 exempts shallow test holes and dewatering wells from Regulation 903 unless they are constructed in a "contaminated site", but fails to define what constitutes a "contaminated site" (i.e. brownfield properties subject to Part XV.1 of the EPA; landfills with Reasonable Use limit exceedances; contaminant attenuation zones; pollutant spills; roads or highways, etc.?). Similarly, existing subsections 12(2) and (3) impose minimum separation distances between new wells and "sources of pollution", but fails to specify what is meant by this term (i.e. known or suspected sources; actual or potential pollution; does "pollution" mean something other than "contamination" or "impairment"?).

In light of these and other examples, CELA recommends that the MOE should develop and include appropriate definitions of the key words and phrases used within the proposed reform of Regulation 903. In our view, the absence of such definitions undermines the clarity, effectiveness and enforceability of Regulation 903.

CELA RECOMMENDATION #3: Proposed section 1 should include definitions of "free chlorine residual", "natural gas or other gas", "contaminated site", "sources of pollution", and other key words and phrases used within Regulation 903.

(b) Exemptions

New section 1.0.1 of the MOE's proposed reform of Regulation 903 identifies eight types of "wells" (as defined by the *Ontario Water Resources Act* (OWRA)) which will no longer be subject to the Act or the Regulation. However, neither the EBR Registry Notice nor the MOE's *Guide* provides any substantive reasons (or an assessment or the pros or cons) for exempting such wells from the Regulation 903 regime. It is conceivable that some or most of these wells are worthy candidates for exemption, but the MOE's decision-making process in this regard is not traceable or replicable.

Of the various exemptions proposed by MOE, we are most concerned about the wholesale exemption of "ponds". Having regard for subsection 35(1) of the OWRA, it is clear that excavated ponds fed by groundwater meet the statutory definition of "well", and, depending upon the circumstances, such ponds have potential to affect the quantity and quality of groundwater. Indeed, the creation of ponds in hydrogeologically sensitive areas (i.e. the protective zones within the Niagara Escarpment Plan Area) has led to considerable controversy and public concern. Accordingly, CELA recommends that the wholesale "pond" exemption should be reconsidered by MOE, and if a partial exemption for certain ponds is deemed appropriate, then the exemption should be qualified by definitions, conditions or constraints aimed at ensuring such ponds do not pose environmental or health risks.

CELA RECOMMENDATION #4: The MOE should reconsider the proposed wholesale exemption of "ponds" from the OWRA and Regulation 903. If it is appropriate to exempt certain types of ponds, then Regulation 903 should qualify the partial exemption with definitions, conditions or constraints which ensure that exempted ponds do not pose environmental or health risks.

The MOE's proposed changes to Regulation 903 leave intact the existing exemption in subsection 1.1 for "shallow works" (i.e. test holes and dewatering wells not more than 3.0 metres deep, subjection to certain conditions). CELA raised various concerns about this exemption in our 2003 EBR Application for Review (i.e. section 1.1 does not require the supervision of a qualified professional to oversee the completion of an exempted test hole), and we repeated such concerns in our rebuttal of the MOE reply.[17] In any event, there continues to be a distinct lack of clarity regarding circumstances where the exemption is inapplicable (i.e. what constitutes a "contaminated site" for the purposes of subsection 1.1(1)(a))? Therefore, CELA again submits that the MOE should reconsider this exemption or, alternatively, provide some key definitions (i.e. "contaminated site") to allow the industry, stakeholders and regulators to understand when this exemption is – or is not – applicable.

[17] CELA EBR Application for Review, page 10; CELA Response to the MOE Reply, page 24.

CELA RECOMMENDATION #5: The MOE should reconsider the existing exemption in section 1.1 for shallow test holes and dewatering wells or, alternatively, should develop some key definitions and greater prescriptive detail regarding shallow test holes and dewatering wells.

(c) Siting Requirements

As we mentioned during our recent briefing with MOE staff, CELA submits that the proposed amendments to section 12 of the existing Regulation do not satisfactorily address the issue of appropriate separation distances between new wells and septic systems or other nearby sources of potential contamination.

For example, current subsection 12(1) contains an outdated reference to O.Reg.403/97 (Building Code), which has since been replaced by O.Reg.350/06 (as amended), and which establishes a complex procedure for calculating site-specific separation distances. Similarly, current subsections 12(2) and (3) impose mere 15 and 30 metre separation distances between new wells and undefined "sources of pollution", depending on whether watertight casing is used to a depth of 6 metres.

These existing separation distances strike CELA as somewhat arbitrary if not highly questionable, and they could allow placement of new wells in relatively close proximity to on-site or off-site sources of groundwater contaminants (i.e. waste, sewage, or nutrient management facilities; petroleum or chemical production/storage, etc.). Indeed, it seems highly incongruous to allow wells to be drilled 15 to 30 metres away from a landfill site, particularly when the MOE's own guidelines recognize that lands within 500 metres of a landfill's fill area are the most likely to be impacted by "significant contaminant discharges" from the landfill.[18] In light of current scientific knowledge about contaminant pathways and travel times (including those for pathogens which can remain viable for prolonged periods of time in groundwater and surface water), CELA suggests that the MOE should formally review the adequacy of these fixed separation distances. Among other things, this review should include a comparative analysis of regulations, standards and "best practices" in other jurisdictions in relation to separation distances between wells and sources of pollution.

Conceptually, fixed separation distances are attractive because they provide simple quantitative direction that can be readily understood by well constructors, well owners and regulators. However, given the difficulty of prescribing numerical "one size fits all" separation distances that will work effectively in all factual circumstances, an alternative option for the MOE to consider is the imposition of a general duty upon well contractors to use all reasonable care to prevent siting new wells in locations where the wellwater may be impaired from on-site or off-site sources of contamination.[19]

We would not suggest, however, that siting should be left entirely to the discretion of well constructors, who may lack the education, training or professional qualifications (i.e.

[18] MOE Guideline D-4: Land Use On or Near Landfills and Dumps, section 5.3.

[19] As precedents for imposing enforceable "reasonable care" duties, see section 194 of the EPA and section 116 of the OWRA.

Professional Geoscientists Act) to make informed judgments about well siting in hydrogeologically sensitive settings. Where such circumstances exist, indicia of "reasonable care" could include whether the proposed siting was reviewed by the well contractor with a professional hydrogeologist or engineer, and whether the well contractor, in fact, followed the advice or direction provided by these professionals.

A further alternative to consider is the establishment of a permitting system for certain classes of wells (i.e. those intended for drinking water purposes) so that proposed well locations would have to be reviewed and approved by MOE inspectors before the well is constructed. Permits for well construction are required in other North American jurisdictions (i.e. Wisconsin's Wells Regulation NR 812), and CELA submits that the development of an appropriate permitting system in Ontario would certainly be consistent with the overall objective of "meeting or exceeding" best practices in leading jurisdictions.

CELA RECOMMENDATION #6: The MOE should immediately review and revise the separation distances mandated by subsections 12(1), (2) and (3) of Regulation 903. As an alternative to fixed separation distances, consideration should be given to imposing a general duty upon well constructors to use all reasonable care to prevent new wells from being sited in locations where the wellwater may be impaired from on-site or off-site sources of contaminants. In the further alternative, consideration should be given to establishing a permitting system for certain classes of wells (i.e. those intended for drinking water purposes) so that proposed well locations would have to be reviewed and approved by MOE inspectors before the well is constructed.

(d) Sealant and Annular Space

Proposed sections 14 to 14.6 impose revised requirements in relation to sealing the annular space for various types of wells. While these proposed amendments may be well-intentioned, CELA submits that the revisions do not satisfactorily resolve the interpretive difficulties which were originally identified in our EBR Application for Review and our rebuttal to the MOE reply.[20]

For example, the proposed amendments are premised upon the current definition of "sealant", which is defined as either slurry consisting of at least 20% bentonite solids, or other "equivalent" materials which can form a permanent watertight barrier. However, CELA is aware that this ambiguous (and virtually unenforceable) definition has caused considerable uncertainty and confusion within the wells industry, particularly in situations where bentonite slurry may not necessarily provide a fully impermeable barrier to provide the movement of water, gases or other substances in the subsurface environment.

CELA RECOMMENDATION #7: The MOE should review and revise the current definition of sealant (and related terms), and should develop performance-based standards that mandate the use of appropriate and effective sealing materials as may be warranted in the site-specific circumstances of the newly constructed well.

[20] CELA EBR Application for Review, page 13; CELA Response to the MOE Reply, pages 29 to 32.

(e) Disinfection

The EBR Registry Notice for the proposed reform of Regulation 903 includes a claim by the MOE that the changes were developed, in part, "to respond" to the recommendations of the ODWAC. With respect to disinfection, CELA submits that this MOE claim is misleading if not entirely erroneous.

In particular, the ODWAC specifically recommended that for new and existing wells (i.e. where new equipment is installed), a five-step disinfection procedure should be followed:

> 1. Dose the well, to a maximum of 200 mg/l, to ensure that, after 12 to 24 hours of contact time, the concentration of free chlorine residual is between 50 & 200 mg/l, as confirmed by testing; if not, go to step 2 and then begin again at step 1;
>
> 2. Pump the well out to achieve $\leq$ 1 mg/l free chlorine residual;
>
> 3. Take duplicate samples and test for Total Coliform and *E. coli*. The results of both samples should be zero; if yes, the well is ready for use;
>
> 4. Repeat steps 1 to 3 if any Total Coliforms or *E. coli* are detected.
>
> 5. Contact the local Health Unit for advice if Total Coliforms or *E. coli* persist, or if 3 disinfection cycles result in positive Total Coliform and/or *E. coli* results.[21]

In short, ODWAC clearly recommended that post-treatment bacteriological testing should be carried out to verify whether the treatment, in fact, worked to eliminate harmful bacteria. Indeed, testing and re-treatment appear to be essential components of the ODWAC's expert advice to the MOE regarding disinfection.

While there is some superficial similarity between the ODWAC recommendation and the MOE's new proposal for disinfection (i.e. chlorine residual concentrations), it is readily apparent that the MOE proposal does not include any requirements for post-treatment bacteriological testing, or re-treatment if warranted. In fact, given the absence of post-treatment verification (and re-treatment if necessary), the MOE's proposal does not constitute "disinfection" *per se*, and should instead be labelled in Regulation 903 as "chlorination."

In the post-Walkerton era, CELA finds it unconscionable that the MOE is refusing to fully implement the expert advice of ODWAC regarding disinfection, and that MOE is proposing a disinfection standard that still does not meet "best practice" requirements in other leading North American jurisdictions (i.e. those which have adopted AWWA C654). Moreover, neither the EBR Registry Notice nor the MOE's *Guide* to the proposed reform of Regulation 903 provides any explanation or justification for the MOE's refusal to fully incorporate the ODWAC's expert advice regarding disinfection.

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[21] Letter dated June 16, 2005 from ODWAC to Environment Minister Leona Dombroswky, page 3.

However, based upon our recent briefing by MOE staff, it is CELA's understanding that MOE is hoping to avoid burdening well owners with increased costs if private well contractors were required by law to have bacteriological testing conducted after treatment. CELA also understands the MOE's position that it is always open to well owners to have their wellwater samples tested for free at provincial health laboratories, which could be done after well completion or any time thereafter. In response, CELA submits that the MOE's rationale is misguided and unpersuasive.

First, there is no compelling public policy reason to prevent well contractors from taking and submitting private well samples for free testing by the local public health laboratory. Where this occurs, the well contractor is simply acting as the agent of the private well owner, who is currently entitled to have the sample tested for free by the public laboratory. If the overall public interest objective is to ensure wellwater potability and to safeguard public health, then there is no logical basis for the MOE's insistence that well contractors can only engage private laboratory services for bacteriological testing purposes. Indeed, Recommendation 86 of the Walkerton Inquiry (see above), states that the Ontario government should ensure that bacteriological testing is "easily available" to private well owners across the province. In our view, Recommendation 86 is best achieved if the Ontario Government (including the Ministry of Health and Long-Term Care) takes all necessary policy, fiscal and regulatory steps to ensure that well contractors can have their clients' wellwater sampled for free at public health laboratories.

Second, by failing to expressly require post-treatment bacteriological testing, the MOE is ultimately relying upon the discretion and knowledge of private well owners to have their wells tested from time to time. Undoubtedly, some well owners can and do take samples to the local public health laboratory for testing, but countless others do not currently do so, even with the availability of free testing. In CELA's view, the determination of whether harmful bacteria are present in drinking water is too important to leave to the whim of private well owners. Accordingly, we maintain our view that the Regulation 903 disinfection standard must impose a legal duty upon the well contractor to ensure that post-treatment bacteriological testing is undertaken to verify that the treatment was effective.

Third, CELA submits that not only should Regulation 903 impose a post-treatment bacteriological testing requirement, it should also include a mandatory duty to re-treat if Total Coliforms or *E. coli* are detected in the first test. If these organisms persist after re-treatment, then the well owner should solicit and act upon advice from the local medical officer of health on making the wellwater potable. Otherwise, the well owner should be obliged to decommission the well in accordance with the prescribed requirements (see below).

The bottom line is that under the MOE's current proposal, there is <u>no</u> mandatory requirement on anyone (i.e. either the well contractor or well owner) to test the well to verify that the wellwater is safe to drink. Unless and until this serious omission is rectified by MOE, CELA submits that public health and safety will remain at considerable risk. Indeed, because of the lack of post-treatment verification and re-treatment requirements, it can only be concluded that the MOE's "new" disinfection standard is as deficient as the one it purports to replace.

CELA RECOMMENDATION #8: Proposed section 15 must be amended to expressly require the well constructor to ensure that at least one post-treatment bacteriological test is undertaken to determine whether Total Coliforms or *E. coli* are present. If these organisms are detected, then the well contractor should re-treat and re-test the well. If Total Coliforms or E. coli persist after re-treatment, then the well owner should solicit and act upon the advice of the local medical officer of health in order to ensure potable drinking water. If potability cannot be achieved, then the well should be promptly and appropriately decommissioned by the well owner.

CELA notes that proposed section 15 requires chlorinated water to be pumped out of the well until the prescribed free chlorine residual concentration (i.e. $\leq$ 1 mg/l) is attained. However, the standard fails to stipulate that the pumped-out water should be handled or discharged by the well contractor in a manner that does not impair surface water or groundwater resources. In contrast, we note that the AWWA C654 standard contains provisions governing the proper handling (i.e. neutralizing chemicals) and discharge of heavily chlorinated wellwater. While "best practice" options for handling chlorinated water could be outlined in the forthcoming technical guide (see above), CELA submits that Regulation 903 itself should entrench a positive duty upon the well contractor to take all reasonable steps to ensure that chlorinated wellwater is not pumped out in quantities, concentrations or under conditions that may impair the quality of any surface water or groundwater, or that cause, or are likely to cause, adverse effects within the meaning of the *Environmental Protection Act.*

CELA RECOMMENDATION #9: Proposed section 15 should include provisions similar to AWWA C654 in order to require well contractors to take all reasonable care to ensure that chlorinated wellwater is not pumped out in a quantity, concentration, or under conditions that may impair the quality of surface water or groundwater, or that cause, or are likely to cause, adverse effects within the meaning of the *Environmental Protection Act.*

(f) Abandonment and Corrective Measures

The MOE's proposed amendments to section 21 of Regulation 903 attempt to impose revised requirements for wells containing natural gases or producing non-potable water. However, it is CELA's view that the proposed amendments do not satisfactorily address concerns about such matters raised years ago in CELA's 2003 EBR Application for Review and 2004 rebuttal of the MOE reply.[22]

For example, with respect to natural gases, proposed subsection 21(6) imposes a duty upon well owners to "immediately abandon" the well unless unspecified "measures" are undertaken to manage the gas in a manner that prevents any potential hazard. Similarly, proposed subsection 21(7) imposes a duty upon the well owner to "immediately abandon" the well if it permits the movement of natural gases between subsurface formations (and thereby impair water resources), unless unspecified "measures" are undertaken to prevent such movement at "at all times."[23]

[22] CELA EBR Application for Review, page 8; CELA Response to MOE Reply, pages 20 to 23.

[23] These (and other) provisions do not apply if the well owner obtains the written consent of the Director: see proposed section 21(8). However, as noted in the CELA response to the MOE reply (page 23), there appears to be no standardized protocol or criteria for obtaining the Director's consent to continue using non-compliant wells, and

As noted above, however, the proposed amendments still do not define what is meant by the term "natural gas or other gas." It is also unclear what threshold is required before abandonment or corrective measures are triggered. Under subsection 21(6), for example, will such steps have to be undertaken upon the detection of any prescribed gases in any amount or concentration, or is abandonment/corrective action limited to situations where gases are detected in concentrations that create risk of fire, explosion or other adverse health impacts? In addition, the proposed amendments do not require the well contractor (or anyone else) to actually test for the presence of explosive, noxious or dangerous gases, even in areas of the province where such gases are known to occur naturally (i.e. radon, hydrogen sulphide, etc.) or as a result of human activities (i.e. methane emanating from open or closed waste disposal sites). If testing for gas is a "best practice" that provides critically important information to the well owner, then it should not be simply suggested in the forthcoming technical guide as a good idea; instead, it should entrenched in Regulation 903 as a mandatory duty.

CELA RECOMMENDATION #10: The MOE should reconsider and revise proposed amendments to section 21 to ensure that well contractors are obliged to undertake appropriate field testing for potentially dangerous gases in order to determine whether well abandonment steps (or corrective measures) are required. This revision should prescribe the threshold concentrations of gases that will trigger abandonment steps or corrective measures.

Under proposed subsection 21(5), a similar obligation to abandon the well, or to follow corrective measures advised by the local medical officer of health, is imposed if the well does not produce "potable" water for whatever reason (i.e. presence of pathogens, naturally occurring substances, or manmade chemicals transported in groundwater from off-site sources). As a result of our involvement in drinking water and source water protection initiatives, CELA is aware of various surveys and studies which indicate numerous rural wells in Ontario do not meet current potability standards, as prescribed by section 10 of the *Safe Drinking Water Act* and regulations thereunder.

It should be further pointed out that current potability standards are not limited to microbiological contaminants, but also include various chemical and radiological parameters: see O.Reg. 169/03, as amended. Thus, while local medical officers of health may be able to provide some useful advice where non-potability is caused by the presence of bacteria (i.e. install appropriate point-of-entry treatment equipment), it is less clear to CELA that these officials have sufficient expertise in well drilling, water treatment, engineering, hydrogeology, or environmental toxicology to provide appropriate advice to well owners where non-potability is caused by elevated concentrations of pesticides, leachate contaminants, polyaromatic hydrocarbons, PCBs, dioxins, furans, or other "exotic" substances emanating from off-site sources. It is also unclear to CELA why the onus and expense of undertaking such corrective measures should be foisted upon private well owners under Regulation 903, rather than the persons who own or operate the sources of contaminants which are causing the non-potability.

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there does not appear to be an appeal mechanism if the Director refuses to grant consent, or if the Director imposes the consent on conditions that are unacceptable to the well owner.

In any event, CELA recommends that if the MOE intends to impose and start enforcing this new obligation to abandon non-potable wells (or to obtain and follow advice from the medical officer of health), then the MOE must immediately undertake a significant public outreach/education campaign so that private well owners are aware of this new obligation before it takes effect, and so that they can take appropriate steps (i.e. wellwater sampling) to ensure compliance with Regulation 903. Ideally, this campaign should be undertaken in conjunction with the Ministry of Health and Long-Term Care. In addition, over the past four years, literally tens of thousands of new wells have been created and disinfected across Ontario in accordance with a "deficient" standard (as concluded by the ODWAC). Thus, CELA submits that it is incumbent upon MOE to undertake a public campaign to advise private well owners to test their existing wells as soon as possible.

CELA RECOMMENDATION #11: Before proposed section 21(5) comes into force, the MOE should undertake an effective, multi-media public outreach program across Ontario to advise private well owners to have their wellwater tested for drinking water parameters under current potability standards, particularly if their wells have been constructed since 2003. The MOE's public outreach program should also provide adequate information about the forthcoming obligation under Regulation 903 to either abandon non-potable wells or solicit and follow the advice of the local medical officer of health.

PART IV – CONCLUSIONS

For the foregoing reasons, CELA concludes that even if the MOE's proposed amendments to Regulation 903 are passed, the Regulation will still be plagued by serious interpretive, implementation, and enforceability difficulties. This is particularly true with respect to the revised disinfection standard which, in CELA's view, will still be "deficient" due to the MOE's unjustified refusal to fully adopt the ODWAC's expert advice regarding the need for post-treatment verification and re-treatment if necessary. In addition, because Regulation 903 still lacks key requirements found within AWWA standards, it cannot be seriously contended that Regulation 903 now meets or exceeds "best practices" found in other North American jurisdictions. The bottom line is that while MOE rhetoric may claim the proposed amendments will place Ontario at the leading edge, the unfortunate reality is that Ontario is still on the trailing edge of regulatory well standards.

Accordingly, CELA calls upon the MOE to re-think and revise the proposed amendments which have been critically analyzed in this brief. In summary, we appreciate the MOE's interest in reforming Regulation 903, but we strongly urge the MOE to improve the content, expand the scope, and enhance the enforceability of the proposed amendments to Regulation 903 before they are passed into law.

We trust that our findings and recommendations will be duly considered by the MOE as it consider its next steps in fixing the Regulation 903 regime. If requested, we would be pleased to again meet with MOE staff to elaborate upon the various issues and concerns identified in this submission.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

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cc. The Hon. Laurel Broten, Minister of the Environment
Gord Miller, Environmental Commissioner of Ontario