

Chapter 4

Departments of the Environment and Local Government and Health and Wellness

Domestic Well Water Quality

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Departments of the Environment and Local Government and Health and Wellness Domestic Well Water Quality

Background

4.1 A reliable supply of safe drinking water is important to everyone. The recent water quality disaster in Walkerton, Ontario dramatically reinforced the fact that bacterial contaminants such as *E. coli* and coliform can lead to significant health risks and even death. Though Walkerton was a municipal water system, similar risks exist for domestic wells. Approximately 40% of New Brunswickers living in small towns and rural areas rely on domestic wells as their primary source of water. Approximately 2,500 new wells are drilled each year. Most of these people expect their well water quality to be excellent.

4.2 Because our Office has an ongoing interest in the themes of public safety and the environment, we felt it important to address some aspects of domestic water quality in the Province. We believe that in order to ensure the safety of the people of New Brunswick, the government must demonstrate that people and organizations are complying with safety standards and regulations set for the Province. In keeping with this, our Office was interested in auditing some aspects of safety regarding water quality for individuals with domestic wells. We began a value-for-money audit in September 1999. Our audit was substantially completed in July 2000.

4.3 One area where the Province of New Brunswick has set regulations and safety standards is under the *Clean Water Act*. Two regulations that contribute to the prevention of drinking water problems for individuals on newly drilled domestic wells are the *Water Well Regulation* and the *Potable Water Regulation*.

4.4 The *Water Well Regulation*, administered solely by the Department of the Environment and Local Government, includes a licensing requirement for well contractors, drillers and diggers. It contains a detailed set of standards which must be met during the well drilling and construction process and specifies well location set back distances from structures and potential contaminant sources such as septic systems and landfill sites. It mandates contractors, drillers and diggers to complete a detailed log report that serves as useful information for the Department.

4.5 The *Potable Water Regulation*, administered jointly by the Department of the Environment and Local Government and the Department of Health and Wellness, requires well contractors, drillers, and diggers to attach pre-numbered metal well identification tags to all new wells. It also mandates that well contractors, drillers, and diggers sell water testing “vouchers” to homeowners, entitling them to a complete water analysis. It is mandatory that all homeowners with newly drilled wells have their water tested within twelve months of well construction. The Department of Environment’s Analytical Services Laboratory (the Lab), carries out this test for homeowners by performing a complete bacterial and chemical water quality analysis. The Lab forwards these results to the Department of Health and Wellness. Results are then compared to Guidelines for Canadian Drinking Water Standards and New Brunswick Health Advisory Limits. The Department of Health and Wellness, in turn, notifies domestic well owners regarding their water test results.

Scope

4.6 The three audit objectives for this assignment were as follows:

- to determine if the government has systems and practices in place to ensure compliance with the *Water Well Regulation* and the *Potable Water Regulation* under the *Clean Water Act* as it relates to private wells;
- to determine if satisfactory procedures have been established to measure and report on the effectiveness of the *Water Well Regulation* and *Potable Water Regulation* as it relates to private wells; and
- to determine if the Department of the Environment and Local Government’s performance indicators appropriately address protection of water resources supplying individuals on private wells.

4.7 We developed six criteria to assist us in determining whether or not the objectives were met. The comments in this chapter are organized by these criteria.

4.8 The initial planning phase of our audit consisted chiefly of documentation reviews and interviews with staff from both the Department of the Environment and Local Government and the Department of Health and Wellness. Based on the information reviewed,

we identified the audit objectives presented above. We then developed criteria as the basis or standards for our review.

4.9 In the conducting phase we obtained audit evidence by performing detailed audit testing at the Department of the Environment and Local Government's Analytical Services Lab and the Department of Health and Wellness's five regional health offices. We performed extensive audit testing at the Department of the Environment and Local Government head office. We continued our audit process by interviewing staff and reviewing further documentation. We have used all information gathered to support our findings, conclusions and recommendations that are presented in this chapter.

Results in brief

4.10 The requirements of the *Potable Water Regulation* are not well understood within the Department of Health and Wellness. Certain aspects of this regulation and the *Water Well Regulation* are not adhered to by either the Department of the Environment and Local Government or the Department of Health and Wellness. Furthermore, they are not clearly communicated to well contractors, drillers and homeowners. In particular, we found that homeowners were often unaware of the need to have their water tested when new wells are drilled, even though they are paying for that service. Government is not currently enforcing the regulations for dug wells, despite the increased risks from such water sources.

4.11 We found many instances whereby homeowners were notified of water test results well after the three working day limit set out in regulation. The lab reports sent out to homeowners are technical and complex, and thus difficult to understand and interpret. Although the Department of Health and Wellness considers water to be not drinkable if coliforms are present, only two of the five regions we visited were clearly directing the homeowner to boil such water before consumption.

4.12 The Department of the Environment and Local Government has only one trained inspector in the Province to monitor all aspects of its Domestic Well Water Program. The Department has no record of inspections of any drilling activities for the approximately 7,500 new wells drilled in the last three years.

4.13 In our opinion, the government does not have an adequate enforcement system to ensure that all affected parties comply with the *Water Well Regulation* and the *Potable Water Regulation*. In the past three years, there have only been two prosecutions against well contractors and drillers, and none against well diggers or domestic new well owners. The Department of the Environment and Local Government's procedures for dealing with enforcement issues are informal, inconsistent and poorly documented.

4.14 The government does not have a process in place to ensure a regular review of the regulations under the *Clean Water Act*. Aspects of the regulations require attention. In particular, we are concerned that domestic wells supplying large numbers of individuals (for trailer parks, campgrounds, churches and tourist attractions) are not required to be tested on an ongoing basis.

4.15 The government is not reporting sufficient information to demonstrate whether the regulations are achieving their intended results. Some information that is reported is inaccurate.

4.16 The Department of the Environment and Local Government has not established performance indicators relating to the protection of water resources for individuals using domestic wells.

Communication of regulatory requirements

4.17 Our first criterion was:

The government should have adequate procedures in place to communicate legislative requirements of the Water Well Regulation and Potable Water Regulation to affected parties.

4.18 We believe that part of successfully implementing a regulation is to ensure that all affected parties are well educated as to what their responsibilities are under such regulation. We carried out our audit work to determine if the government has procedures in place to sufficiently educate all parties; that is, departmental staff, well contractors, drillers, diggers and homeowners. We felt it important for staff to possess good working knowledge of the regulations relating to programs for which they are responsible. We were also looking to see if procedures were in place to effectively communicate important regulatory requirements to the public. In this regard, we conducted a phone survey in which we contacted 83 homeowners that had wells drilled or modified within the past three years. We interviewed these homeowners in part to determine their understanding of the “domestic well water program” and their general level of knowledge regarding regulatory requirements. We also interviewed some members of the New Brunswick Ground Water Association (NBGWA) executive. The NBGWA is a group of licensed well contractors and drillers in the Province.

Department of the Environment and Local Government staff

4.19 We determined that the Environmental Planning Section and Analytical Services Section are responsible for carrying out the majority of departmental responsibilities under the *Water Well Regulation* and *Potable Water Regulation*. Regarding newly drilled domestic wells, the Environmental Planning Section addresses various water quality and quantity problems, issues water well driller and contractor permits, maintains a well log data base, and provides well identification tags to well drillers. The Analytical Services Section performs a complete bacterial and chemical water quality analysis and forwards such results to the Department of Health and Wellness. This analysis includes assessing water samples for a wide range of possible contaminants, some

of which are total coliform, E. coli, lead, arsenic, selenium, and chromium.

4.20 Based on our interviews with departmental staff, we have determined that there are no formalized procedures in place to ensure staff has adequate regulatory knowledge. When staff are hired to new positions, there is no training manual that includes information on programs for which they are responsible. From our various interviews we determined that until recently, work plans and performance appraisals did not reflect the requirement to have proficiency in the applicable regulations. Management informed us that they have now taken this initiative with some employees.

4.21 The majority of departmental staff work in a “hands on” manner, dealing with issues regarding the regulations on a daily basis. This provides some assurance that the majority of staff do possess adequate regulatory knowledge. We are concerned however, at the lack of formalized procedures for ensuring staff hired to new positions are well versed in their regulatory responsibilities.

Recommendations

4.22 We recommended that the Department of the Environment and Local Government ensure new staff are adequately trained regarding regulatory responsibilities.

4.23 We recommended that the Department of the Environment and Local Government incorporate a requirement for knowledge of departmental regulatory requirements as part of all employee work plans and performance reviews.

Departmental response

4.24 *The Department will ensure that new staff hired, with water well and potable water regulatory responsibilities, will be adequately trained.*

4.25 *For those employees who are engaged in enforcing regulatory requirements, the Department will ensure that knowledge of these requirements will be part of their work plans and performance reviews.*

4.26 One area we were particularly interested in was the communication of test results to homeowners. While regulation clearly states that communication with the homeowner is the responsibility of the Department of Health and Wellness, we found the Lab is mailing a copy of test results to all homeowners. Our initial thought was that the Lab staff may have been unaware of the requirements of regulation. However, the Department of the Environment and Local Government informed us that the reason the lab also provides a copy of the test results to homeowners is due to an informal agreement with the Department of Health and Wellness. Due to the fact that the copy of the lab report the Department of Health and Wellness receives from the Lab (and subsequently mails to the homeowner) is a faxed copy, the two Departments felt it would be easier for the homeowner to read the

original copy. Since the copy originated at the Lab, the Lab agreed to forward this to the homeowner.

4.27 Because the Department of Health and Wellness is also providing test results, homeowners are currently receiving their test results from both Departments. In our opinion, this situation may cause confusion for the homeowner. It is also a duplication of services resulting in excess administrative and mailing costs for the government.

Department of Health and Wellness staff

4.28 In our audit we determined that the majority of departmental responsibilities of the *Potable Water Regulation* are carried out by central office and the regional health offices. The major responsibilities of the Department of Health and Wellness under the regulation are as follows:

5(4) If a test of a sample of water from a well referred to in subsection (1) or (2) establishes that the water does not pose a significant health risk,¹ the Minister of Health and Community Services shall send by ordinary mail a letter informing the owner of the well of the results of the test.

5(5) If a test of a sample of water from a well referred to in subsection (1) or (2) establishes that water poses a significant health risk, the Minister of Health and Community Services shall within three working days after receiving the results of the test send by prepaid registered mail a letter informing the owner of the well of the results.

4.29 We interpret this aspect of the regulation to mean that the Department not only has a responsibility to notify domestic well homeowners of water tests results, but also to ensure adequate information is provided to ensure homeowners understand the results. This would enable homeowners to make informed decisions regarding their water quality.

4.30 A significant portion of our auditing work involved visiting five regional health offices around the Province. One of the areas we were interested in was determining the level of proficiency amongst staff regarding the regulation, and whether staff were in compliance with the requirements of the regulation. Based on interviews conducted, we determined that the Department of Health and Wellness has no

formalized procedures for ensuring staff possess adequate regulatory knowledge regarding programs for which they are responsible.

1. For all parameters other than those that are primarily aesthetic in nature, the Department of Health and Wellness has determined “significant health risk” to be essentially any level over the NB Health Advisory Limit, based on the Guidelines for Canadian Drinking Water. It appears the Department does make some exceptions for some inorganics, such as manganese, that only affect the appearance issues associated with water.

4.31 In general, we found there to be very poor working knowledge of the *Potable Water Regulation* amongst regional staff. In all but one of the regional health offices we visited, various regional directors, regional team leaders, and inspectors were not aware of some regulatory requirements. Notable was the requirement for the Department to notify the domestic well homeowner of water results within three working days by prepaid registered mail if such results pose a “significant health risk”.

Requirement to notify homeowners

4.32 While most regional staff were aware it is the responsibility of the Department of Health and Wellness to notify homeowners of test results regarding bacterial contamination (*E. coli* and coliform), not all were aware it is also the Department’s responsibility to notify homeowners of inorganic test results (e.g. lead, arsenic). In two of the regions we visited, several inspectors were not contacting homeowners with test results over the Health Advisory Limits for such inorganic parameters. They were under the assumption that it is the Department of the Environment and Local Government’s responsibility. In one region, the owner of a rental unit apartment for which test results showed unacceptable levels of arsenic, chloride, selenium, and sodium in November 1998 did not receive the test results from the regional health office until our audit visit. The rental unit was currently being occupied by a woman and her young children. In another region, inspectors admitted to us they do “nothing” in regards to notifying homeowners regarding inorganic test results.

Requirement to notify homeowners within three days

4.33 Very few regional staff members were aware of any time deadline for notification of test results that are of a “significant health risk”. None of the regional offices we visited have formalized procedures regarding turn around time for test results. Some regional directors stated they forward information to inspectors in staff meetings to “try to get bacterial results out as soon as possible, usually within two or three days”; others have left it up to the inspectors’ discretion. Our auditing determined that in numerous cases homeowners were notified of test results well beyond three working days.

Requirement to notify homeowners by registered mail

4.34 All of the regional offices we audited are currently using regular mail, fax or phone to notify homeowner of results. Only in one regional office were staff aware of the requirement to notify homeowners by registered mail if test results pose a significant health risk. None of the regions have ever done this. Staff feel it would be expensive and impractical to do so.

4.35 Some staff state that since registered mail can take longer to get to the homeowner than regular mail, it is better to use the regular mail system. However, it appears that the original purpose for registered mail may have been to ensure proper documentation of the communication process. That is, if a test shows the homeowner has a potential health risk from a domestic well, it would be important for the Department to

document that it had communicated the risk. In most of the regional health offices we could not find any standard compensating procedure which ensured documentation of proof of communication with the homeowner in the absence of registered mail. Further, there was no documentation in place to indicate the Department of Health and Wellness was intending to replace this registered mail aspect of the regulation with a more effective communication technique.

Confidentiality of test results

4.36 One of the regional health offices is clearly in non-compliance with the regulation regarding test results. The *Potable Water Regulation* Section 6 states:

The results of a test of a sample of water from a well are confidential and shall not be disclosed by the Minister, the Minister of Health and Community Services or any person employed by the Department of the Environment or the Department of Health and Community Services to a person other than the well owner unless

(a) the person requesting the results obtained the written consent of the owner or

(b) the disclosure is in an aggregate form and does not identify the individual well from which the sample was taken.

4.37 In this case, regional health office staff provides individual homeowner domestic well results to whoever requests them. Results are often given to bankers, realtors, or other government departments, without consent from the homeowner. Staff were not aware of this aspect of the regulation regarding confidentiality. In our opinion, this example of non-compliance with the regulation could have serious legal implications for the Department of Health and Wellness.

Concern regarding management direction

4.38 As noted, we were concerned over the lack of regulatory knowledge regarding departmental responsibilities demonstrated by a number of staff members. Disturbing to us was the fact that some regional directors and team managers appeared to have little knowledge regarding what inspectors were doing regarding programs for which they are responsible. We have concerns this may in part stem from the current organizational structure of the Department. While we did not carry out an organizational study, in our discussions with Central Office we were informed that the Department of Health and Wellness currently does not require directors and managers to have detailed knowledge of regulations. According to central office officials, directors and managers are to have a general knowledge regarding programs in place and what such programs are supposed to be doing.

Recommendations

4.39 We recommended that the Department of Health and Wellness review procedures in place to ensure staff are aware of departmental regulatory responsibilities.

4.40 We recommended that the Department of Health and Wellness incorporate a requirement for knowledge of departmental regulatory requirements as part of all employee work plans and performance reviews.

Well contractors and drillers

4.41 There are numerous regulatory requirements in the *Water Well Regulation* and *Potable Water Regulation* for well contractors and drillers. Some of these requirements include obtaining a yearly licence from the Province, using specified materials for well construction, adhering to specified distances for well location, and attaching metal identification tags to newly drilled wells. There is also a requirement to complete and remit to government a log report, detailing homeowner identification, yield information, geological information, property identification number, and well identification number. This log report is to be returned to the Department of the Environment and Local Government within thirty days of drilling. A detachable “voucher” is attached to the bottom of each log report. This voucher entitles each homeowner to a water analysis at the Analytical Services Lab. Well contractors and drillers are mandated to sell these vouchers to each homeowner and to submit the fee collected from the homeowner to the Department when they return the log reports.

4.42 The Department is currently charging homeowners \$140.30 for each voucher sold, \$100 of which goes to government general revenue; \$22 is a rebate back to the well contractor or driller and the remaining \$18.30 is HST for the federal government.

No licensing exam for established drillers

4.43 Despite the numerous regulatory requirements, the Province currently has no requirements regarding knowledge of regulations for those well drillers and well contractors licensed by the Province prior to 1 July 1990. For those licensed after this date, the Province does require a passing grade on a certification exam administered by the Department of Training and Employment Development. Part of this exam includes knowledge of regulatory requirements. However, only about 1% of total licensed well drillers and contractors have this certification, as most were licensed within the Province prior to 1990.

4.44 From our interviews held with both the Department of the Environment and Local Government and some members of the New Brunswick Ground Water Association executive, we have determined that educating well drillers and well contractors in regards to their regulatory responsibilities has not been ongoing. When the *Potable Water Regulation* came into force in 1994, the then Department of the Environment met with the Association executive regarding their regulatory responsibilities. Since initiation of the regulation, meetings with the Association have been sporadic and more problem solving in nature than educational.

4.45 During our audit we determined that the Department of the Environment and Local Government provides information to contractors and drillers on an “as needed” basis. In other words, as issues arise the Department will meet with the contractors and drillers involved. The Department also has a staff member attend the Atlantic Water Well Association Annual Meeting and hosts various technical shows for interested contractors and drillers.

4.46 We are concerned, however, by what we found to be a lack of regular, consistent, documented regulatory information provided to well contractors and drillers. Five years ago the Department set out to develop a document that would serve as an educational tool for drillers and contractors regarding regulation. This document has never been finalized and distributed. We feel it would be beneficial to complete this document and ensure distribution to all contractors and drillers in the Province. Further, we feel in order to ensure adequate regulatory knowledge amongst contractors and drillers, the Department must disseminate information on a regular basis. This could take the form of informational packages or newsletters.

Recommendation

4.47 We recommended that the Department of the Environment and Local Government provide educational material to well contractors and drillers on an ongoing basis regarding their responsibilities under regulation.

Departmental response

4.48 The Department is of the opinion that we have always provided the Association, and all its members, with information regarding the Regulations and accompanying administrative procedures. The Department has circulated a draft guide to the well drillers for their comment, and has provided to the well drillers, as needed, information regarding new drilling requirements. The Department will continue to dialogue with the well drillers.

4.49 In 2001, the Department will identify training needs for drillers and contractors on regulatory requirements and will explore training options.

Well diggers

4.50 The majority of wells in the Province are drilled by licensed well drillers. There are, however, areas of the Province that due to certain geological conditions are better suited for dug wells. Similar to well contractors and drillers, there are numerous regulatory requirements for well diggers in the Province. For instance they must be licensed by the Province, complete and submit detailed log reports for each newly dug well to the Department of the Environment and Local Government, and sell water testing vouchers to homeowners with newly dug wells.

4.51 Since the initiation of regulation, the Department of the Environment and Local Government has not attempted to implement the requirements for well diggers. Though staff informed us they believe

one digger did obtain a license a number of years ago, the Department does not currently require well diggers to obtain a yearly license. Of utmost concern to us, however, is that the Department is not implementing the mandatory selling of vouchers and water testing for dug wells. We feel that owners of dug wells are not being provided with the same opportunity for water testing as owners of drilled wells. This is despite the fact that one Department of Health and Wellness official stated to us that “water from a dug well is generally considered to be non potable until proven otherwise.”

Recommendation

4.52 We recommended that the Department of the Environment and Local Government begin to license well diggers and educate them as to their requirements under regulation.

Departmental response

4.53 *The Department agrees to enforce the Water Well Regulation, specifically in relation to the well digger provisions, and will enforce permit requirements under the Regulations through Regional Enforcement.*

4.54 *In 2001, the Department will identify training needs for well diggers on regulatory responsibilities, and will explore training options.*

Domestic well owners

4.55 The only mandatory requirements for homeowners with a newly drilled domestic well are to pay for a water testing voucher and subsequently submit a water sample for analysis at the Province’s Analytical Services Lab. Given the potentially significant health risks of contaminated water, and the direction provided by the regulation, we felt it important to determine what practices are in place to educate homeowners as to these requirements.

4.56 When the *Potable Water Regulation* was initiated in 1994, the Department of the Environment and Local Government conducted a Province-wide media campaign to educate domestic well owners on the importance of water testing and the mandatory requirement to do so. Another media campaign was implemented in 1996. These campaigns consisted of one-time radio and newspaper ads across the Province. The Department feels that this was not good coverage for the money spent and that perhaps it was not reaching the target audience.

4.57 Since 1996, the Department of the Environment and Local Government, in consultation with the New Brunswick Ground Water Association, has developed numerous “fact sheets” on water testing. These fact sheets were intended to be the vehicle for communication between the Department and domestic well owners. Given the importance of this information to the domestic well owner, we expected it would be a priority for the Department to ensure that such information did indeed reach the homeowner. The Department informed us that they have distributed fact sheets to interested homeowners at local home shows and provided them to realtors and banks. The fact sheets are

also available at the Department's head office and regional offices. As will be elaborated upon later in this chapter, the Department also includes a copy of the current fact sheet when mailing reminder letters to homeowners who have neglected to have their water tested. However, the Department has continued to rely on the New Brunswick Ground Water Association to distribute fact sheets to homeowners at the time of drilling.

4.58 In surveying various members of the New Brunswick Ground Water Association, we determined that the Association feels it is not its responsibility to educate the public regarding water testing; thus contractors and drillers generally have not been consistently distributing fact sheets to homeowners.

4.59 We mentioned that a significant part of our audit was to conduct phone surveys with 83 homeowners with newly drilled domestic wells. We wanted to determine how many of these homeowners understood the voucher system and had any knowledge of regulatory requirements. In general, we determined the majority of homeowners knew little about their water quality, the voucher system and regulatory requirements. We determined that 60% of them did not recall receiving a fact sheet of any kind from their well drilling company. Not surprisingly then, was our finding that 56% had no knowledge of the mandatory testing requirement.

4.60 Many homeowners were very confused over whether they had even paid for a water test. Under the current system, the homeowner pays the well driller at the time of drilling \$140.30 for a voucher. As is stated on the log report, there is supposed to be a separate cheque (besides what the driller charges for drilling a well) made out to the Minister of Finance. However, often the well drillers simply add the cost of the water test to their own bill for services provided, not differentiating between the cost of having the well drilled and the cost of the water test.

4.61 The current voucher that is issued to domestic well homeowners adds to the confusion. The voucher states "The fee for this Well Water Testing voucher is \$122 plus \$18.30 HST." Because this voucher is given to the homeowner **after** they may have paid the driller their fee, some homeowners we surveyed felt this was an additional charge they would have to pay. This was a contributing factor to why they did not get their water tested. On the contrary, some homeowners that did have their water tested insisted that they had not paid a fee, despite the fact our audit determined that they had.

4.62 While meeting with many staff members at the Department of the Environment and Local Government, a consistent theme seemed to be "the well drillers are not educating the homeowners regarding water testing". The Department has gone so far as to produce reports detailing

voucher redemption rates (number of homeowners that had their water tested) per contractor or driller. The purpose of these reports was to determine which contractors or drillers were doing a good job at giving out fact sheets or explaining the importance of water testing. We feel that educating homeowners regarding regulations would clearly be a departmental responsibility.

4.63 Since the implementation of the mandatory testing requirement for domestic well owners in 1994, the voucher redemption rate has maintained a level of approximately 45%. For the years 1994 to 1999 the Province has collected voucher money from 7,122 newly drilled domestic well homeowners for which we could find no record of water testing. While our primary concern is for public safety, we also note that this equates to approximately \$970,000 in revenue collected on behalf of the Province for which no services have been provided. We felt part of this low redemption of vouchers may be due to the fact homeowners have not taken the initiative to have their water tested despite the information they have been provided with. However, given the findings of our homeowner phone survey, it is our feeling that a great part of this was due to homeowners' lack of understanding regarding the importance of water testing and the voucher system. In our survey we determined that 56% of homeowners did not know of the mandatory requirement for testing and 46% did not know they had paid for the water test at the time of drilling. Several homeowners we interviewed appeared to know little of the importance of having their water tested. For instance, a number of homeowners were of the view that if the water smelled good and looked good, there was no problem. Given the results of our survey and the low voucher redemption rate, we feel it would be beneficial for the Department to look at various options for educating homeowners. One option would be for the Department to mail the fact sheets on water directly to the homeowner. In this case, we suggest altering the current fact sheet to further draw attention to the fact that testing is mandatory and that it has already been paid for by the homeowner. Alternatively, the Department is currently looking at moving to a "permit" system. In this case, the homeowner would contact the Department prior to having a well drilled to obtain a permit. The permit would, in effect, include paying for a water-testing voucher. This would be an ideal opportunity for the Department of the Environment and Local Government to effectively educate domestic new well homeowners. Homeowners would be purchasing the vouchers from the Department or perhaps Service New Brunswick. In either case, trained government employees could ensure the homeowner was adequately informed.

Recommendation

4.64 We recommended that the Department of the Environment and Local Government develop improved procedures for educating domestic new well homeowners on the applicable regulatory requirements. These procedures should be tested after an appropriate implementation period to ensure they are more successful than the current approach.

Departmental response

4.65 *The Department believes that ‘fact sheets’ are an excellent means of reaching the desired target audience (the well owners) directly. The Auditor General has stated that the result of a homeowner phone survey indicated that the homeowners had a lack of understanding regarding the importance of water testing, and that it was mandatory. The survey failed to indicate the source for this lack of knowledge; i.e. homeowner did not receive fact sheet, homeowner did not read fact sheet, or fact sheet did not convey correct message. To resolve this issue the Department will dialogue with the well drillers to ensure a consistent distribution of the fact sheet, as well as it will review the fact sheet with the purpose of emphasizing that testing is mandatory.*

4.66 *The Department is considering alternatives to the rebate system. Some of the alternatives considered may provide an opportunity to educate well owners regarding their regulatory requirements.*

Conclusion

4.67 This criterion was not met. In our opinion, the government does not have adequate systems and practices in place to communicate the legislative requirements of the *Water Well Regulation* and *Potable Water Regulation* to affected parties.

Monitoring and reporting on compliance

4.68 Our second criterion was:

The government should have adequate systems in place to monitor and report on compliance with the Water Well Regulation and Potable Water Regulation.

Unclear allocation of responsibilities

4.69 Auditing and reporting under this criterion was made somewhat difficult because of one overlapping area of responsibility. While we understand that the Department of the Environment and Local Government is responsible for the *Water Well Regulation*, the division of responsibilities for the *Potable Water Regulation* were not so evident. Various staff members from both Departments had differing views on the subject of departmental responsibility.

4.70 For instance, a senior staff official in the Department of Health and Wellness stated that the entire *Potable Water Regulation* was a shared responsibility between the two departments. Another official from this Department stated that sections 1-5 of the *Potable Water Regulation* were clearly the responsibility of Environment and Local Government and sections 6-9 were clearly the responsibility of Health and Wellness. Actually, this statement is not completely accurate as section 5(2) gives us perhaps the clearest example of overlap. It states that for homeowners who have not redeemed their vouchers within twelve months, “the Minister of the Environment or the Minister of Health and Community Services may take a sample of water from the well and have it tested at the Provincial Analytical Services at the expense of the owner”. There is no further direction as to which Minister shall take the lead.

4.71 A senior policy official at the Department of the Environment and Local Government stated that because the *Potable Water Regulation* falls under the *Clean Water Act* (which is an Act of that Department) that they had “umbrella” responsibility for the entire regulation. A staff member from the Department of Health and Wellness countered this argument by referring to Section 3(2) of the *Clean Water Act*. This section states that:

If a conflict exists between this Act or any regulation made under this Act and the Health Act or any regulation made under the Health Act in a matter relating principally to public health, the Health Act and any regulation made under it prevail.

4.72 In the opinion of this staff member, section 3(2) may negate this concept of “umbrella responsibility”. This is because in one sense the Minister of Health and Wellness has a “special status” under the *Clean Water Act* for health related matters.

4.73 At one time, a Linkage Committee consisting of staff from both departments was useful in “linking” the departments regarding issues arising from the *Potable Water Regulation*. This committee has not been active in quite some time. In our opinion, it would be useful to re-enact such a committee. An administration protocol clearly detailing departmental responsibilities would be helpful. This should be made available to all staff currently involved in programs relating to the *Potable Water Regulation*.

Recommendation

4.74 **We recommended that the Department of the Environment and Local Government, in conjunction with the Department of Health and Wellness, develop an administration protocol for the *Potable Water Regulation*, clearly delineating various departmental responsibilities regarding domestic wells.**

Departmental response

4.75 *The Department agrees with the Auditor General that protocols should be developed. The Department will meet with representatives from the Department of Health and Wellness to establish a written protocol with regard to responsibilities under the Potable Water Regulation.*

Monitoring and reporting compliance – Department of Health and Wellness

4.76 As previously discussed, the major responsibility of regional health office staff under the *Potable Water Regulation* as it relates to newly drilled domestic wells is to notify homeowners of **all** test results. We carried out audit procedures to determine the current protocol for handling private well water test results, to see if regions are currently complying with the regulation and to determine if procedures are in place to monitor and report such compliance. Given the seriousness of their responsibilities for communicating with homeowners, we were disappointed to find that in none of the regional offices we visited, were

team managers performing random or regular monitoring of this process.

4.77 A few years ago the Department underwent a structural re-alignment. Based on this, the Department functions more as a team and relies on staff's own professionalism to know what their responsibilities are and how to fulfil them. Given this, there is currently little supervision of inspectors' work functions. In fact, in most of the regions we visited, there was confusion over who the supervisors actually were. In two of the regions visited, we encountered staff that requested **we** determine who their supervisors are!

4.78 Our audit within the regions uncovered instances of what we would consider serious instances of non-compliance by departmental staff. We believe a cause of this non-compliance is due in part to a lack of ongoing monitoring by the Department. We feel that it would be beneficial for team managers to fulfil an "auditing" function relating to work done by inspectors.

4.79 As discussed previously in this chapter, none of the regional offices we visited are notifying domestic well homeowners of their test results by registered mail, as is required if such results are over Health Advisory Limits. And none of the regional offices we visited have policies in place regarding "turn around time" for notifying the homeowner of test results. This is of particular concern for test results that are over the Health Advisory Limits. Regulation currently requires notice to be within three working days. The Department has never monitored this function of "when" water test results are sent to homeowners. As discussed earlier, we found there to be many instances whereby homeowners were notified of test results well after three working days. In some cases, they were not notified at all.

Recommendations

4.80 We recommended that the Department of Health and Wellness **implement procedures for monitoring and reporting the extent to which the communication of test results complies with the *Potable Water Regulation*.**

4.81 We recommended that the Department of Health and Wellness **review the potential issues posed by the apparent confusion in the field over chain of command and supervisory responsibilities. Corrective action should be taken as indicated by the results of such a review.**

Responsibility for clear communication

4.82 Although neither the Act nor the *Potable Water Regulation* uses the wording "clear communication" in regards to the Department's responsibility to the homeowner, we believe that would certainly be implied. After all, if the goal is protection of the public, then surely the Department of Health and Wellness would want to ensure any message communicated was clearly understood. In this regard, we examined the

documentation provided to homeowners by the Department to communicate test results.

Requirement to notify homeowners by letter

4.83 As required by the *Potable Water Regulation*, the Department has a responsibility to notify all homeowners of their water test results in a letter. Though the Department has no policy regarding this issue, its current practice is to mail homeowners a copy of the Lab report that was faxed to them by the Analytical Services Lab. While some regional offices we visited were including a brief cover letter, indicating to the homeowner that water test results are enclosed, most were not. In our opinion, simply mailing a copy of a lab report does not constitute a “letter” and thus the Department’s current practice is not in compliance with the regulation. It would increase the homeowners’ understanding of the enclosed water test results if an informative letter addressed to the homeowner was included.

Lab test results report lacks understandability

4.84 While this detailed, rather scientific lab report may be adequate for trained health inspectors to use for their analysis, in our opinion it is not understandable by the average homeowner. Some examples of terminology in the current microbiology lab report range from wording like “Alpha 9223B”, and “limit of quantification” to “colony forming units”. If, for instance, you have E. coli in your water, on your first analysis, you receive a “P” as an explanation. If you look further down the page you see “P” stands for “positive.” With E. coli present on a second analysis you may receive the explanation that your level is “> 200”.

4.85 More confusing still are the lab reports for inorganic substances like lead, arsenic, chromium, and selenium. The homeowner receives a rather long list of parameters that were tested, comparing homeowner results with Health Advisory Limits. If test results are higher than Health Advisory Limits, the result has a tiny asterisk next to it. If you are curious to know what this means, scanning the page carefully you would find at the bottom of the page in tiny print, the following explanation “indicates greater than acceptable limit”. Next to some results were the letters “L”. The report states “L means less than /”. When questioned in regards to this, the Analytical Services Lab explained to us that it means “less than detectable limit”.

4.86 One lab report we read stated “the water is supersaturated with CaCO₃, possibility of CaCO₃ deposition.” No further explanation was provided, more than likely leaving an average homeowner bewildered.

4.87 Given the general complexity of the report, and the specific cases we have noted, we weren’t surprised to find in the homeowner phone survey we conducted that a good number of homeowners stated that they were confused regarding their water test results. We would like to emphasize that although the report comes from the Lab, the

responsibility to communicate the results falls to the Department of Health and Wellness.

Recommendation

4.88 We recommended that the Department of Health and Wellness develop a method for notifying homeowners of their water test results that is understandable and clear. This method should be consistent with the regulation.

Lack of descriptions provided to homeowner

4.89 When a homeowner receives water test results with substances that are over the Health Advisory Limits, it is up to the individual homeowner to perform necessary remediation and/or have their water re-tested until the problem has been clarified. In meeting with various officials in the Department, we heard time and time again, that “it is up to the individual to get their water re-tested, we can’t force them to do so”. We are concerned, however, that homeowners have not been provided with adequate information to make an informed decision as to what to do regarding their water test results.

4.90 We are not confident that homeowners understand the water test report. And we are not satisfied that the Department of Health and Wellness has provided information to homeowners regarding the implications of given substances that are over the Health Advisory Limits and what the potential health risks could be.

4.91 The Department of Health and Wellness has established that if coliform is present in initial testing, the water is not suitable for human consumption. Given the potentially serious health implications of coliform, we were surprised to find that the Department of Health and Wellness does not provide any information regarding the health implications of bacterial substances to the homeowner. Though three of the regions are mailing parameter descriptions for inorganic substances, **none** of the regions are mailing parameter descriptions for bacterial (E. coli/total coliform) results. We noted in our survey that many homeowners did not know the meaning or implications of bacterial contamination.

Recommendation

4.92 We recommended that the Department of Health and Wellness include clear and meaningful descriptions of all parameters and their associated health risks, when mailing test results to homeowners.

Inconsistency between regions

4.93 It became obvious to us during our audit of regional health offices, that homeowners receive varying degrees of service regarding communication of water-testing results throughout the Province. A homeowner from Saint John for instance, would receive a different level of service than in Campbellton. Some discrepancies amongst regions were as follows:

Boil Orders: Given that the Department of Health and Wellness considers water to be not potable if presence of coliforms are noted on initial test

results, we were surprised to see that only two of the five regions we visited are clearly specifying to the homeowner to boil such water before consumption. One of these regions included a “boil order letter” while the other uses a stamp clearly indicating to not drink the water before boiling. We feel this to be an important aspect of educating the homeowner in regards to the seriousness of their water test results. We feel the Department should take a position on when to initiate a “boil order” for private well owners and apply it consistently among the regions.

Method of contact with homeowner: In one health region we visited, inspectors phone each and every homeowner with bacteria contaminated water supplies prior to sending their results to them by mail. In this region, we were pleased to note that of all the lab reports we audited, all but one homeowner had their water problem solved and subsequent water tests proved clear. We applaud this region for their effort, and judging by test results, it seems to have paid off. In other regions, some inspectors try to phone homeowners, but often they do not.

4.94 The Department of Health and Wellness staff informed us that they are currently in the process of standardizing procedures for various programs for which they are responsible. In our opinion, this is a step in the right direction for the Department. Once developed, we would expect the Department to distribute the information to all regional health offices and provide staff training regarding such procedures.

Recommendation

4.95 We recommended that the Department of Health and Wellness develop standardized procedures for communicating with domestic well homeowners.

**Monitoring and reporting on compliance -
Department of the
Environment and Local
Government**

4.96 The Department of the Environment and Local Government has many responsibilities regarding both the *Water Well Regulation* and the *Potable Water Regulation*. We understand it to be its responsibility to monitor compliance with the regulations by departmental staff, homeowners and well contractors and drillers.

Analytical services lab

4.97 The Analytical Services Lab is accredited by the Standards Council of Canada in association with the Canadian Association of Environmental Analytical Laboratories Inc. In the past, staff have received the Department’s Employee Recognition Award for their “commitment to quality in environmental testing”.

4.98 We were pleased to find what we would consider to be excellent compliance with regulations at the Lab. For our sample chosen, 100% of the lab reports had been faxed to the Department of Health and Wellness in what we would consider to be an acceptable and timely manner. While we were pleased to note that staff members do keep and review a logbook to ensure successful transmission took place, we have some concerns that there is no regular monitoring and reporting of this communication process. Under the current system, if a staff member did

not attempt to fax the report in the first place, it would not be noticed. Since providing water test results to the Department of Health and Wellness is an important link in ultimately providing information to the homeowner, we feel that there should be some type of regular monitoring and reporting to ensure that all lab reports are sent to the Department of Health and Wellness.

Recommendation

4.99 We recommended that the Department of the Environment and Local Government establish a process to monitor the Lab's compliance in communicating test results to the Department of Health and Wellness in accordance with the regulation.

Departmental response

4.100 *The Department, by January 1, 2001, will have a fully operational Laboratory Information Management System (LIMS) at the Environmental Laboratory. This system will have the capability to compile and automatically e-mail water test results, in directory form, to all Health and Wellness Regional Offices. Furthermore, LIMS will have the capability to routinely check for water samples that have not been finalized in an appropriate length of time. LIMS will generate a 'sent mail' log that will document all transmissions. This log will be monitored regularly.*

Environmental Planning Section

4.101 One of the responsibilities of this section includes handling and tracking the issuance of metal well identification tags. Approximately 18,000 metal well ID tags have been issued by the Department of the Environment and Local Government to well contractors and drillers since the inception of the *Potable Water Regulation*. The metal well identification tags are permanently attached to every newly drilled or modified well. The number on the tag corresponds to the number submitted on the log report and attached voucher. The well ID tag serves as a useful tool for the Department in tracking log information to a particular well.

4.102 We determined there was poor monitoring of the issuance of tags. In recent years, record keeping generally consisted of a hand written list of tags issued. However the list is not always in numerical order and there are some unaccounted for tags. When we requested a computer-generated report detailing tags issued with corresponding well log data, we determined there to be numerous tags issued with no corresponding well log data. This means no log report was returned for these issued tags.

4.103 Another aspect of the Environmental Planning Section's responsibilities under this regulation is to ensure fees are collected in accordance with regulation. Section 3(2) of the *Potable Water Regulation* states the Department is to collect a water-testing fee from homeowners of \$132. Prior to April 1997, this fee was subject to GST of 7%. In April 1997, the Department decided to change the fee to \$122 + HST. Both the NBGWA and the Department felt it to be in the

best interest of the homeowner to not charge the additional tax and so the fee was lowered by \$10. This administrative change has not been reflected in the regulation. From April 1997 to the fiscal year ended 31 March 1999, this difference between the amount actually charged and the amount still specified in the regulation amounts to approximately \$50,000 lost revenue for the Province.

4.104 Government policy requires departments to get approval from the Board of Management prior to introducing changes to fees. This approval was not obtained. Of equal concern was that when questioned about this change, no current staff seemed to know for certain if authority had been obtained or not. In our opinion, this issue indicates that management may not be actively monitoring and reporting on compliance with the regulations.

Recommendation

4.105 We recommended that the Department of the Environment and Local Government develop procedures for monitoring and reporting on compliance with key aspects of the *Water Well Regulation* and *Potable Water Regulation* which have been assigned to the Environmental Planning Section.

Departmental response

4.106 *The Department agrees with the Auditor General that there is value in developing procedures for monitoring and reporting on compliance issues. A Well Development Officer, together with the Enforcement Branch will work to develop and deliver monitoring and reporting procedures on compliance, province-wide, and develop and deliver a training program to Regional staff.*

Monitoring and reporting on compliance by homeowners

4.107 The only mandatory requirements for domestic well owners are to pay for and obtain testing for all new wells. The Department of the Environment and Local Government has monitored the number of domestic new well owners that have their water tested (referred to as the redemption rate). As previously stated the average redemption rate from 1994 to 1999 has been approximately 45% each year. For any homeowners that don't comply, the Department has been mailing one-time reminder letters. The Well Development Officer monitors the number of homeowners that subsequently comply with the regulation after receiving a reminder letter. Part of our audit exercise included looking at this function. For our sample chosen, 85% of newly drilled domestic well homeowners that had not had their water tested were sent reminder letters. The remainder were not contacted due to missing identification information. We feel these reminder letters are valuable documentation for the Department, showing it has provided some information to homeowners.

Monitoring and reporting on compliance by well drillers and contractors

4.108 Under the *Water Well Regulation* and *Potable Water Regulation*, there are numerous requirements for well drillers and contractors. These include:

- obtaining a license prior to drilling;

- locating a well only outside of a specified distance from potential sources of contamination;
- properly completing the well log reports;
- selling a water testing voucher to homeowners; and
- remitting the funds back to government.

4.109 In our opinion, monitoring these numerous activities would require the Department to maintain an acceptable management information system to track information and to perform inspections of well contractor and well drilling activities.

Monitoring and management information systems

4.110 We determined that the Environment Planning Section does **not** possess an adequate management information system to enable it to monitor the various aspects of well contractor and driller requirements under regulation.

4.111 The current system does not have the capabilities to perform information management tasks that one might expect in a program such as this. Further, management informed us that the Department does not have the necessary number of staff needed to otherwise perform such monitoring tasks manually. We would particularly expect that if a regulation requires an outside party to collect money on behalf of government, adequate systems should be in place to monitor such activity.

4.112 We feel that in these circumstances, a good management information system should be capable of at least the following:

- producing reports detailing batches of well ID tags issued and numbered log reports issued to contractors and drillers, which would enable the department to require contractors and drillers to account for previously issued tags and log reports before being issued new ones;
- reconciling, for any given contractor or driller, well ID tags issued to log reports issued, to log reports returned with accompanying voucher money;
- disallowing entry of log reports that are missing property identification numbers; and
- “flagging” of any wells drilled by a contractor or driller prior to the yearly contractor or driller licenses being paid for.

4.113 The current management information system does not associate the number of tags issued to contractors and drillers to the number of log reports returned by them. Nor it is capable of displaying a summary of past tags issued to a particular contractor or driller. To do so manually would require significant time and effort on behalf of staff. Staff are thus not currently monitoring the number of well ID tags issued to

contractors and drillers and ensuring they are accounted for before issuing new ones.

4.114 Our audit involved testing to determine if, for all domestic well water tested at the Analytical Services Lab, the Department received the log report and the accompanying voucher money. In our opinion this was a reasonable monitoring procedure that we would expect the Department to be doing on an ongoing basis. Our findings were that since 1994 there were approximately 800 water tests (where homeowners had redeemed vouchers) for which there was no record of log reports or voucher money to accompany them. If all of these were indeed unaccounted for, it would be a loss of \$112,240 in revenue for the Province.

4.115 We determined that many of these wells were drilled in the 1999 calendar year. Though regulation requires drillers to submit log reports within a month of drilling, the Department feels these are still in the system and just haven't been returned by the contractors or drillers. Twenty-nine of these log reports are on hold by the Department until the drillers properly complete the reports. The remainder were simply explained by the Department as errors in the system or otherwise unaccounted for.

4.116 The Environmental Planning Section downloads water sample results from the Analytical Services Lab into its own Potable Water Database. However, due to many difficulties, there are currently over 600 water sample test results that are in "error" and not captured by the potable water database system. These errors can include missing well ID information, missing well owner information, juxtaposition of owner's names, etc. Given the fact that a water test result in "error" means inaccessible information for the Department, we feel it would be in their best interest to correct these errors as soon as possible.

4.117 The current management information system is not linked to the Potable Water Database. This means that well information is not coupled with water sample information. For any given well ID number the capability does not exist to see the well information (for example depth of casing, or location) along with various water sample results. It would be beneficial in our opinion to link well information to water sample information. This information would prove to be valuable in mapping areas in the Province with specific water attributes for water quality and quantity.

4.118 We were pleased to see that during our audit, the Department initiated a ground water system investigation that established the scope and requirements of a new ground water management application. This investigation detailed numerous inefficiencies with the current system and outlined suggestions for improvement. Subsequent to our audit, the Department informed us that approval has been granted for the

implementation of this application. We feel this is a step in the right direction to help the Department fulfil its mandate of monitoring activities for these two regulations.

Recommendation

4.119 We recommended that the Department of the Environment and Local Government develop a timeline for completion and implementation of the proposed ground water management information system.

Departmental response

4.120 *By January 1, 2001, the Ground Water Management Information System will be fully implemented.*

Lack of field inspections

4.121 In the Province of New Brunswick, there are 43 licensed contractors and 82 licensed drillers. For the approximately 2,500 new wells drilled yearly, the Department of the Environment and Local Government provides one trained inspector. This inspector functions as a Well Development Officer responsible for operating all aspects of the Domestic Well Water Program. Of the approximately 7,500 newly drilled wells in the past three years, the Department of the Environment and Local Government has **no** record of regular or random inspections on any of these wells. The Department claims the inspector will “drop in on a well drilling site, if in the area doing something else”, but it has no record of such. It concerns us that one well contractor interviewed stated “everyone knows the Department has no inspectors in the Province.” The Department has intended for quite some time to train inspectors at their various regional offices to perform this function, but has never brought it to fruition. We feel it would be beneficial for the Department to provide regular random inspections of well drilling activities. The Department informs us that the implementation of the above discussed management information system would greatly assist departmental staff with their current responsibilities, thus enabling them to train regional inspectors to perform field inspections.

Recommendation

4.122 We recommended that the Department of the Environment and Local Government implement procedures to ensure it has regular monitoring and reporting on compliance by well contractors and drillers.

Departmental response

4.123 *The Department agrees with this recommendation, and will look at procedures to increase training of regional staff and, as such, will utilize their abilities on monitoring and reporting on compliance by well contractors and drillers.*

Conclusion

4.124 This criterion was partially met. While the Department of the Environment and Local Government has limited monitoring regarding redemption rates and missing property identification numbers, we are very concerned over a general lack of monitoring of compliance with regulations by departmental staff, well contractors and drillers and homeowners. We feel the Department of the Environment and Local Government has provided inadequate field inspection activity for these

regulations. We are equally concerned about the lack of monitoring of staff compliance with regulations within the Department of Health and Wellness. In our opinion, this could have serious ramifications for the program and the Province.

Enforcing regulations

4.125 Our third criterion was:

There should be an adequate enforcement system to ensure that affected parties comply with the Water Well Regulation and Potable Water Regulation.

Responsibility for enforcement

4.126 We have determined it to be primarily the responsibility of the Department of the Environment and Local Government to ensure that adequate enforcement systems are in place for *Potable Water Regulation*. We have also determined it to be the sole responsibility for the Department of the Environment and Local Government to enforce the *Water Well Regulation*. In our work, we noted a number of areas of non-compliance. For example, contractors and drillers are not remitting log reports within thirty days of drilling, homeowners are not submitting water samples for analysis, and diggers are not being licensed, are not selling vouchers, or submitting log reports. We wanted to determine what systems and practices were in place to bring these situations into compliance.

4.127 The Department of the Environment and Local Government has a Compliance and Enforcement policy that is “designed to maximize compliance with sound environmental practices, rather than simply relying solely on prosecution of offences.” The processes for enforcement can be warnings, schedules of compliance, ministerial orders, and initiation of a full investigation, which may lead to prosecution. A part of our audit included determining what the Department’s Regional Services and Enforcement Branch is currently doing in regards to enforcing these regulations. We would expect that if the government has regulations in place, it will have systems and practices in place to adequately enforce them. Not only would we expect appropriate action to be taken on behalf of the Department, but also adequate and accurate reporting of such.

Lack of formalized procedure

4.128 We determined in our audit, that acts of non-compliance generally first come to the attention of the Environmental Planning Section staff who are operating programs to implement regulations. Some of the more common occurrences would be a homeowner calling to say they can’t get potable water. After investigation, the Environmental Planning Section may determine the well driller did not use sufficient casing, or drilled the well too close to a septic system. Another example would be a licensed well driller calling to say they saw a non-licensed well driller drilling a well.

4.129 In our interviews with both the Environmental Planning Section and Enforcement Section, we determined that there is the following

“understanding” between the two sections. Environmental Planning Section staff try to deal with enforcement issues firstly by contacting the persons involved. In the case of well contractors and drillers, this contact is usually by phone. Environmental Planning Section staff will attempt to solve the problem and only contact Enforcement if and when they are unsuccessful. In this case, Enforcement would open a file on the issue, investigate, and determine whether to proceed with prosecution. In the past three years, we determined that the Enforcement section has only opened five files in regards to the *Water Well Regulation* and *Potable Water Regulation*. Enforcement staff admitted to us that they have not been very involved with well drilling activities.

4.130 In our audit, we determined there to be inconsistencies in protocol. Environmental Planning Section staff will contact Enforcement immediately if it is the case of an unlicensed driller, but generally not for anything else. In our interviews with Environmental Planning Section staff, we determined there to be some uncertainty as to what was supposed to be done. We are concerned over lack of formalized procedure for dealing with enforcement issues regarding these regulations.

Recommendation

4.131 We recommended that the Department of the Environment and Local Government formalize procedures for staff to follow regarding enforcement issues arising from the *Water Well Regulation* and *Potable Water Regulation*.

Departmental response

4.132 *The Department agrees with the recommendation by the Auditor General. The Department will initiate discussions to examine compliance and enforcement procedures, with the purpose of developing a Protocol Document for distribution to all enforcement personnel involved with inspections and enforcement.*

Poor documentation

4.133 We found that there is little, if any, documentation relating to many enforcement issues that have come to the attention of Environmental Planning Section staff. As previously discussed, because most issues are dealt with by phone, there is no formal record. While some files exist regarding more detailed investigations, the majority of work done in this regard goes unrecorded. Our concerns are two-fold. Firstly, we feel lack of documentation regarding compliance issues could have serious legal implications for the Department. For example, if a homeowner was experiencing water problems due to a well drilled too close to a septic system, we feel the expectation could exist for the Department to have clear documentation regarding actions taken. Secondly, we feel it is difficult to assess the appropriateness of actions taken in response to occurrences, if no documentation exists. A lack of documentation of actions taken, or in some cases not taken, may lead to a lack of accountability by staff responsible for handling such occurrences.

Recommendation

4.134 We recommended that the Department of the Environment and Local Government review its documentation procedures in order to develop an effective means of recording key compliance and enforcement information.

Departmental response

4.135 *The Department agrees with the recommendation and will track compliance and enforcement information on each individual driller and contractor.*

Inaccurate reporting

4.136 Part of our audit involved looking at the Department of the Environment and the Local Government's policies and procedures for reporting enforcement issues regarding the *Water Well Regulation* and *Potable Water Regulation*. The Regional Services and Enforcement Branch currently provides both a summary of occurrences and a summary of charges in the Department's Annual Report. (The Branch defines an "occurrence" as any incident relating to regulation that causes a departmental employee to be out of the office for more than one hour.)

4.137 We performed audit work around the summary of occurrences as reported in the 1998 and 1999 Annual Reports. As reported by the Department for this time frame, the Branch dealt with 47 *Water Well Regulation* and 8 *Potable Water Regulation* occurrences in the Province. We examined occurrence files in both the central office (Fredericton region) and the Grand Falls regional office. Our findings indicate that although there is an occurrence reporting system in place, often these occurrences do not meet the Department's definition. We determined that 38% of reported occurrences were simply records of homeowners dropping their water samples off at the Department to be sent to the Lab for analysis. Another 38% were requests for water tests by homeowners (not new well owners) for a number of reasons ranging from simple curiosity to petroleum odour.

4.138 In our opinion, the current occurrence reporting system lacks integrity and consistency. We would expect occurrences to directly relate to the regulations which they are reported under. For example, under the *Water Well Regulation* an occurrence could be well drillers drilling without a license, a well being too close to a septic system, or a well without the proper casing. Under the *Potable Water Regulation* an occurrence could be a driller not selling vouchers.

Recommendation

4.139 We recommended that the Department of the Environment and Local Government review procedures that are currently in place for reporting occurrences to ensure they relate to the applicable regulation. Lack of consistency amongst branches should be addressed.

Departmental response

4.140 *The Department agrees to review occurrence-reporting procedures for accurate correlation with applicable Regulation. The Department will revise its occurrence response system to ensure consistency among all Branches of the Department.*

4.141 Despite the shortcomings of the occurrence reporting system that exists within the Regional Services and Enforcement branch, we feel that its existence has potential benefits to the Department. We feel it serves as important documentation from a legal standpoint and provides accountability for actions taken or, in some cases, not taken. We were concerned that detailed occurrence reporting has not been implemented in the Environmental Planning Section in any consistent manner. Staff do keep some occurrence files along with a general file which contains numerous enquiries from the public. In this file, we determined there to be letters from well owners to the Department with no documentation regarding follow up. The Environmental Planning Section staff does not adhere to the Regional Services and Enforcement Branch's definition of an occurrence. In fact, none of the Environmental Planning Section staff were able to define what they would consistently classify as an "occurrence".

Recommendations

4.142 We recommended that the Department of the Environment and Local Government develop a definition for an "occurrence" to be adopted by all branches within the Department.

4.143 We recommended that the Department of the Environment and Local Government adopt consistent protocol for documenting "occurrences" to be adopted by all branches of the Department.

Departmental response

4.144 *One of the proposed actions of the Department's structural realignment will be the formation of a 'Compliance and Enforcement Committee'. This Committee will develop a revised and consistent definition for the term 'occurrence'.*

4.145 *The Department agrees to adopt consistent protocols for documenting 'occurrences' by all Branches of the Department. The Enforcement Branch will review the present system, to assess if the system meets departmental needs.*

Possible advantages of "ticketing system"

4.146 Coupled with lack of inspections, as previously discussed, were a low number of charges. We determined that for the past three years, there have only been two prosecutions against well contractors and drillers, one of which was successful regarding an unlicensed driller. No action has ever been taken against diggers or domestic new well

owners¹ for failing to comply with regulations. The Regional Services and Enforcement Branch feels that under the current system it is often too costly and time consuming to prosecute.

1. As explained later in this chapter, this could include developers, camp ground operators, trailer parks or churches.

4.147 The Branch is currently investigating the option of “ticketing”. Ticketing would involve giving tickets for violations instead of the current court procedures. Tickets would generally be a smaller fine than the current minimum \$500 fine for individuals. The Department feels this system could potentially be a more feasible method of enforcing regulations. In our opinion, if obtaining a yearly contractor or driller license was contingent on paying all fines owing, then this could prove to be a useful enforcement measure.

Recommendation

4.148 We recommended that the Department of the Environment and Local Government give serious consideration to the concept of “ticketing” for various acts of non compliance under the *Water Well Regulation and Potable Water Regulation*. We recommended that obtaining yearly contractor or driller licenses be contingent on payment of all monies owing.

Departmental response

4.149 *The Department agrees to give serious consideration to the concept of ‘ticketing’ for various acts of non-compliance under the Water Well Regulation and Potable Water Regulation. The ‘ticketing’ option has been under consideration by the Department, and is strongly supported by its inspectors. The Department recognizes the intent of the Auditor General in its recommendation for ‘withholding’ licenses, but it should be recognized that this issue will have to be considered within the context of all acquired fees.*

Conclusion

4.150 This criterion was not met. We feel the government does not have an adequate enforcement system to ensure that all affected parties comply with the *Water Well Regulation and Potable Water Regulation*. In our opinion, the Department of the Environment and Local Government should implement formalized procedures for the investigation, documentation and reporting of occurrences under these regulations.

Review of regulation

4.151 Our fourth criterion was:

The government should periodically review the Water Well Regulation and Potable Water Regulation and make necessary changes in a timely manner.

4.152 We believe it is important to evaluate regulations on a regular basis to determine if they are accomplishing intended goals and meeting the needs of users. In this regard, our audit work involved determining procedures in place at the Department of the Environment and Local Government and the Department of Health and Wellness for regularly reviewing legislation. From our various interviews we determined that neither department has what we would consider formalized procedures in place for regularly reviewing legislation. Both departments seem to look at various aspects of legislation in a more ad hoc fashion, troubleshooting when necessary. We found there to be aspects of

legislation and regulations that were in need of review and change. But the departments, in our opinion, have been slow in doing so.

4.153 The current *Water Well Regulation* and *Potable Water Regulation* came into force on 1 July 1990 and 1 January 1994 respectively. Since that time, there have been no regulatory revisions.

Various requirements for well diggers - Department of the Environment and Local Government

4.154 There are numerous regulatory requirements for well diggers, ranging from obtaining a yearly permit to selling vouchers to homeowners. It was clear to us in our audit that the Department of the Environment and Local Government has known of these requirements since drafting the regulations. However, the Department has made a conscious decision not to enforce this aspect of regulation. One might argue that as soon as the Department adopted this philosophy, it should have amended the regulation accordingly in a timely fashion.

4.155 On the other hand, given the importance of clean water to the lives of New Brunswick residents, one might have expected some sort of re-evaluation of the regulation. The diggers were obviously included in the regulation with some degree of thought and planning. The goal of this re-evaluation would be to determine how to bring the diggers into compliance with the purpose or intent for which they were originally included.

Fee for well water test - Department of the Environment and Local Government

4.156 The Department of the Environment and Local Government has been charging \$140.30 for a water test since April 1997. The current regulation actually requires a charge of \$151.80 (\$132.00 + HST). To date, the Department has not made any change to the regulation to lower the fee to \$140.30.

Inadequacies of certain aspects of current regulation – Department of the Environment and Local Government

4.157 Based on interviews with various Department of the Environment and Local Government and Department of Health and Wellness staff, it was brought to our attention, that there were some areas of the current regulations that were in need of amendment. One example of this is the current requirement under the *Water Well Regulation* to use a minimum of twenty feet of casing for newly drilled wells. Departmental staff felt that, due to certain geological conditions, in various parts of the Province this minimum requirement is insufficient to prevent water problems. In our opinion, the Department of the Environment and Local Government should react to this deficiency in the current regulation in a timely fashion.

Well Drilling Advisory Board - Department of the Environment and Local Government

4.158 In our audit we determined that this Board has been dormant for quite some time. Department of the Environment and Local Government staff believe that the Board was functioning at the early implementation stages of the *Water Well Regulation*. No minutes of meetings were made available to us by the Department. In our opinion, if this Board no longer exists then keeping these sections in the regulations is misleading to the Legislative Assembly and the public. On the other hand, the Board

may have ongoing value that should be supported. It would seem that the Board may have a purpose in partly fulfilling the aims of this criterion; that is, the type of issues on which it can advise the Minister could serve to ensure the regulations were regularly reviewed.

Concerns regarding contamination or integrity of samples - Department of the Environment and Local Government

4.159 Because the objective of water testing is to provide the homeowner with safe water and also to provide the Department with accurate groundwater data, integrity of data is of utmost importance. The current practice at the Department is for homeowners to draw their own water sample to submit for testing. We feel this has the potential to jeopardize meeting both objectives described above. Two scenarios could yield incorrect water results. Either a homeowner could incorrectly draw the sample, or provide water samples from a source other than their own for analysis. Staff in both departments informed us that it is likely that approximately 50% of the initial “unacceptable” test results for presence of total coliform are a direct result of the homeowner incorrectly drawing the water sample. Improper flushing of the system or drawing the sample too soon after the well is drilled are common causes of contamination. This results in extra costs to the government in that potentially the Lab must analyze re-tests and the Department of Health and Wellness must send re-test results to homeowners. There are no additional charges to the homeowner.

4.160 Sometimes the homeowner is actually a developer. The developer has built a house and is the “homeowner” while the home is on the market. In the case of a developer submitting water for testing, there is actually a disincentive to submit a sample that is suspected to be unacceptable. Our audit determined there to be several cases in which developers are the ones who submitted water for testing. Developers are in a potential conflict of interest in that poor test results could directly impact on their operations.

4.161 We felt that given the Department’s objectives, and the importance of accurate results, the Department would be better served to either draw the samples themselves, or hire an external company to do so. This is especially so when a developer is the “homeowner.” The accidental contamination of samples by homeowners could also be reduced through improved education.

Recommendation

4.162 We recommended that the Department of the Environment and Local Government review its current procedures for sample collection to ensure integrity of testing results.

Departmental response

4.163 *The Department agrees to review its current procedures for sample collection as part of its review of alternatives to the current rebate system.*

Wells providing water to more than single family dwellings - Department of Health and Wellness

4.164 As outlined in the *Potable Water Regulation*, owners of domestic wells are only required to have their water tested once, that being upon initial drilling. On the other hand, “public water supplies” are required to submit a sampling plan to the Province and have their water tested on a monthly basis. Public water supplies are currently municipal water supplies, and water systems owned and operated by the Crown (schools, government departments). Our audit involved examining lists of all water tests that fall under the umbrella of newly drilled “domestic” wells. We were surprised to find that many large facilities that are not single family dwellings are still considered domestic wells, and thus have no requirement for ongoing testing. These facilities often have one well, serving a number of individuals. Examples of such establishments are gymnasium facilities, camping grounds, tourist attractions, churches and trailer parks. In our audit, we noted instances of such establishments with newly drilled or modified wells, whereby initial testing showed levels of contaminants in the water that were over the Health Advisory Limits established by the Province. We determined that the Department of Health and Wellness has the same protocol for a water supply affecting a two-person home, as for churches typically known for socials and church suppers that could be supplying five hundred people. Staff generally do not prioritize these establishments in any way.

4.165 We feel that the Department has a responsibility to develop distinct protocol for notifying establishments that are not single family dwellings. In our audit, we found instances whereby tests results for churches and tourist attractions showed unacceptable limits for coliform. In some instances there was no record of contact by the Department, and no subsequent water test that would prove the water to be potable. We are equally concerned about the absence of ongoing testing requirements for trailer parks. The Department of Health and Wellness estimated that there are approximately 10,000 individuals in the Province relying on well water supplied to trailer parks. The Department is currently drafting amendments to the regulation that would mandate owners of trailer parks to test the well water on a monthly basis. We feel this is an important step in ensuring safe water for this large number of individuals and commend the Department on this initiative.

Recommendation

4.166 We recommended that the Department of Health and Wellness review procedures in place for dealing with water test results for wells that supply more than family dwellings. Based on the results of this review, amendments to the regulation could be made as appropriate.

Conclusion

4.167 This criterion was not met.

4.168 We feel the Government has not systematically reviewed the *Water Well Regulation* and the *Potable Water Regulation* and, subsequently, has not made changes in a timely manner.

Recommendation

4.169 We recommended that both the Department of the Environment and Local Government, and Department of Health and Wellness, review current procedures in place to ensure regular review of the two regulations.

Departmental response

4.170 *The Department agrees to work with the Department of Health and Wellness to review current procedures in place to ensure regular review of Water Well Regulation and the Potable Water Regulation. It should be noted that Regulations are reviewed by administering government agencies on an as required basis.*

Measurement and reporting of program effectiveness

4.171 Our fifth criterion was:

The government should have adequate systems and practices in place to ensure relevant and accurate measurement and reporting on the effectiveness of the Water Well Regulation and Potable Water Regulation as it relates to private wells.

4.172 Although we are examining two regulations which only impact the 2,500 new wells that are drilled each year, we would expect to see some public reporting on this area. Therefore we examined several recent annual reports of the two departments to gain an appreciation for the reporting that was taking place.

Effectiveness reporting by the Department of the Environment and Local Government

4.173 We found that the Department of the Environment and Local Government provides some explanatory detail regarding work done in programs designed to implement these regulations. We noted though, a number of areas in current reporting methods that we felt needed improvement. In examining the Department's recent annual reports, we found the descriptions of work done to be at times misleading, vague and inconclusive. For instance, on page 61 of the 1997-98 annual report it states that the program has "ensured that all wells were appropriately tagged". Given the fact that there has at no time ever been any monitoring or inspection of such, we feel this is inaccurate reporting and misleading to the public. Similarly, in one annual report, the Department describes performing "random log audits". From various interviews with Departmental staff we determined this to mean that staff randomly look at log reports for completeness. (i.e. do they include the mailing address, well ID number, etc.) This, in our opinion, does not warrant the usage of such terminology as "audit". Audit procedures generally involve some form of verification of data.

4.174 One important aspect of effectiveness is the achievement of intended results. We believe it would be important for the Department of the Environment and Local Government to measure and report on this aspect of effectiveness.

4.175 We determined that the initial intent of the *Water Well Regulation* and *Potable Water Regulation* was two-fold; firstly, to ensure safe drinking water for new well owners, and secondly to provide

the government with good information relating to ground water in the Province. Given this, we expected to find clearly defined goals regarding these objectives and adequate reporting of progress made in attaining these goals.

4.176 These goals would serve as measurement for how effectively the programs in place to implement the regulation were operating. In our opinion there are really two yard sticks the Department of the Environment and Local Government might use for measuring program effectiveness as it relates to its responsibilities under current regulation. Firstly, the voucher redemption rate (or number of homeowners having their water tested) gives the Department some assurance it has met its regulated responsibilities in contributing to the objective of ensuring safe water for new domestic well homeowners.

4.177 Given that the Department does track and monitor redemption rates, it would be reasonable, in our opinion, to have established goals relating to the percentage of homeowners targeted to redeem vouchers in a given year. The Department has a “fuzzy” goal to see “as many as possible be redeemed”. But it has not quantified this goal. Although the annual reports do, at times, refer to the redemption rate, neither a target rate nor an actual rate is stated.

4.178 Secondly, the number of log reports returned to the Department with adequate ground water information, in our opinion, contributes to fulfilling the objective of acquiring accurate ground water data. Given that the Department does manually review all log reports and monitors the number of reports missing property identification numbers, it would be reasonable in our opinion, to have established goals relating to the percentage of complete log reports received in a given year that would be acceptable to the Department. Again, a “fuzzy” goal exists, in that they would like to see “as many as possible” be returned complete, but the Department has not quantified this goal. We feel this lack of quantifying goals has the potential to lead to a lack of direction and a lack of accountability. To summarize, in general we found there to be little measurement and reporting of the operation of programs to determine if they are accomplishing their initial intentions.

Recommendation

4.179 We recommended that the Department of the Environment and Local Government review procedures in place for reporting program results for the *Potable Water Regulation* and *Water Well Regulation* to ensure they are accurate and useful to readers. As part of this effort the Department should establish goals or targets that clearly relate to the objectives of the regulations.

Departmental response

4.180 *Beginning with fiscal year 1996/97, New Brunswick government annual reports began including specific performance measurement data in response to criteria established by the Auditor General. The Department will ensure that program results for the Potable Water*

Regulation and Water Well Regulation will be included in the 2000/2001 Annual Report. Goals or targets will be established for subsequent Annual Reports.

Effectiveness reporting by the Department of Health and Wellness

4.181 To contribute to fulfilling the objective of ensuring a safe water supply for individuals with private wells, the Department of Health and Wellness has the responsibility not only to notify the domestic well homeowner by letter of test results according to procedures outlined in the regulation, but also, in our opinion, to ensure understandability of such results.

4.182 Given these objectives, we felt the Department's annual report would have some discussion in this regard. We determined, however, that the Department of Health and Wellness does not currently have clearly established goals relating to its work on the *Potable Water Regulation* as it applies to new domestic well owners.

4.183 The Department of Health and Wellness reported on work done in the area of domestic wells in the 1998-99 annual report. This report included a very brief description of work done. No description of objectives, goals, or results were provided.

4.184 The report stated that 21% of the **bacteriological** tests conducted on private water supplies required follow up by Public Health inspectors. (We were unable to determine why the Department only included bacteriological and excluded inorganic test results). When questioned how the Department came up with the 21% figure, we were informed it was from the Analytical Services Lab computer coding. Any test that was coded as a "re-test" (i.e. not a first time test), was counted as having been followed up by the Department. However, our audit determined that such is not always the case. Some re-tests are not follow up tests by the Department and some re-tests that are "follow ups" by the Department are coded otherwise. In our opinion this is inaccurate reporting. We feel that it would be beneficial for the Department to provide more detailed descriptions of programs in place regarding domestic wells and the number of newly drilled domestic well water test results that were analysed by inspectors in a given year.

4.185 In our opinion, a reasonable goal might be "to provide **informative** water test results in accordance with regulation to the homeowner for **every** water sample submitted for testing." We have already discussed several issues concerning the lack of clarity in communicating test results and related information to homeowners. This concerns us. Had the Department of Health and Wellness implemented some regular measurement and reporting of program results, it is possible some of these communication problems may have already been corrected. If the Department was measuring to ensure it provided "**informative** water test results in accordance with regulation to the

homeowner for **every** water sample submitted for testing”, presumably staff would have been made aware of the communication issues.

Recommendation

4.186 We recommended the Department of Health and Wellness improve the discussion of its work related to the *Potable Water Regulation* with respect to domestic wells in its annual report. Information should be focused on the degree to which program activities have achieved intended results.

Conclusion

4.187 This criterion was not met. In our opinion, the government does not have adequate systems and practices in place to ensure relevant and accurate measurement and reporting on the effectiveness of the *Water Well Regulation* and *Potable Water Regulation*. We did not find evidence of clearly defined goals relating to program objectives.

Domestic well water performance indicators

4.188 Our sixth criterion was:

The Department of the Environment and Local Government should have performance indicators that appropriately address protection of water resources supplying individuals on private wells.

4.189 The Department of the Environment clearly defined its goal relating to water quality in its 1999 annual report. The goal is as follows: “To ensure that the quality of the Province’s water resources meets established provincial standards for identified use of the resource (drinking, recreational, aquatic life, etc.)” Part of our audit involved determining if the Department has adequately provided performance indicators as they relate to individuals on domestic wells. In doing this, we determined that the Department addressed only “municipal” water (both surface and ground water) in developing performance indicators and targets. Given that 40% of individuals in the Province rely on private well ground water we find this to be somewhat of an oversight. In our opinion, in keeping with the government’s recommendation to “establish public benchmarks and other measurement devices for programs that they administer”, the Department should consider providing such measurement devices for all programs in place for the protection of groundwater for individuals on domestic wells.

4.190 Departmental officials have informed us of a broad range of departmental activities that serve to prevent or detect potential threats to domestic well water supply. These would include such things as pesticide and fuel tank storage regulations, control over location of various industrial facilities through operating permits, and rural land-use planning through various means. Notwithstanding this, the Department has informed us that it must be clearly recognized that there is a fundamental responsibility that lies with the homeowner to manage their water delivery systems. Any measurement of the success of the Department of Environment and Local Government’s involvement would have to include examining the responsibilities of citizens and the

government in meeting the overall goal. This would put the issue in context.

Conclusion

4.191 This criterion was not met. We determined that the Department does not have established performance measures regarding domestic well water.

Recommendation

4.192 We recommended that the Department of the Environment and Local Government establish performance measures for the broad suite of programs established to prevent drinking water problems for individuals on domestic well water.

Departmental response

4.193 *In 2001, during its Strategic Planning process, the new department of Environment and Local Government agrees to examine the identification of performance measurement indicators in relation to domestic well water.*

Comments of the Department of Health and Wellness

4.194 The Department of Health and Wellness provided the following comments on its responsibilities for the *Potable Water Regulation*:

The Department has reviewed the Auditor General's comments on the Domestic Well Water Quality – Potable Water Regulation 93-203.

The Standard Operating Procedures (SOPs) for Potable Water, by their nature, address most of the issues within the jurisdiction of the Department of Health and Wellness.

The timeframe for development of the SOPs are: the first draft by November 2000, the second draft by January 2001, and the final version completed by March 2001.

The joint Department of Health and Wellness – Environment and Local Government issues are anticipated to be addressed by the Policy and Priorities process.