

Canadian Institute of Public Health Inspectors (CIPHI)  
Board of Certification Oral Examination Content Guide Review  
Employer Survey  
Robert Hart, December 8, 2008

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## Summary

In 2005, the Board of Certification developed an oral examination content guide based on a survey of employees of public health inspectors (PHIs) conducted at that time. The intent of this survey was to ensure that the examination process screened for candidates that met employers' capability needs for entry-level PHIs.

The BOC requires that this survey be conducted every three years in order to keep current with employer needs and adjust the content guide as needed. This report provides the results of the 2008 survey.

The survey distributed this year (attached as Appendix A) was essentially identical to the version distributed in 2005, except that it included an addendum requesting employer's views on the written component of the certification examination. **The results of the written component survey will be provided in a separate report.** The survey was distributed to health departments across Canada via provincial branch executive officers.

The work area component of the survey was based on the BOC *Report on Practicum*. This document provides an extensive overview of the range of environmental health activities that could be undertaken by an entry-level PHI. It was condensed in the survey to allow for ease of completion, but all of the potential work areas were represented.

Entry-level expected competency was measured in the survey by five questions designed to probe for content knowledge, decision-making/investigative skills, and ability to communicate effectively.

In total, 32 completed surveys (up from 29 in 2005) were received from Ontario, British Columbia, Saskatchewan, Alberta, Manitoba, Nova Scotia, and New Brunswick.

***The results found that no significant change in employer needs has occurred since 2005. Therefore, modifications to the exam content guide are not indicated at this time.***

## Survey Results

### Work Areas:

**Table A** provides an overview of the results by work area. In looking at the results, it will be noted (as in the 2005 survey results) that there is some variation in the work area distribution between majority urban and majority rural health departments. Rural departments, for example, spend more time on water quality and less on food safety while urban departments inspect more fixed premises. On balance however, such variation continues not to affect the structure of the exam content guide. As well, no exceptionally large variation in work area distribution between provinces was identified. In fact, there was greater variation among reporting health departments within provinces than across provinces overall.

*Summary of Results for Percentage of Time Devoted to each Work Area:*

Air Quality

Median percentage = 5 (2005 Result = 5)

Range: 0 – 10 (only four respondents reported percentages exceeding 5)

As in 2005, investigation of indoor air quality and enforcement of tobacco legislation, were the top two activities reported. Some health departments continue to report education activities within this work area.

Waste Management

Median percentage = 2.5 (2005 Result = 5)

Range: 0 – 25 (responders reported percentages exceeding 5)

While the median percentage dropped by one-half, seven health departments reported waste management activities at 10% or higher.

Investigation and management of private sewage disposal systems was the most reported activity in this area with all other activities reported approximately equally, but much less frequently.

Water Quality

Median Percentage = 15 (2005 Result = 17)

Range: 1 – 32

In 2005, Ontario health departments reported a larger proportion of time devoted to water quality issues than other provinces (20% vs. 5% respectively). The 2008 results indicate that this gap has closed significantly. With the exception of British Columbia (reporting 5%), all provinces reported greater than or equal to 10% activity.

Issues pertaining to private and municipal/communal drinking water systems were the most frequently reported activities. Recreational water activities and education were commonly reported but less so than the former.

Food Safety

Median Percentage = 45 (2005 Result = 45)

Range: 25 – 72

With few exceptions, this continues to be the major work area for most health departments and reported proportions have not changed significantly since 2005.

Inspection activities continue to rank highest, although activities related to education and HACCP (in both food processing and food service) were also significantly reported.

Fixed Premise Inspections (non-food)

Median Percentage = 10 (2005 Result = 15)

Range: 5 – 40

Median reported percentages dropped slightly though not significantly. Public swimming pool and childcare inspections were reported most frequently. Seasonal premises such as summer camps and migrant farm worker housing also ranked significantly.

### Land Management

Median Percentage = 1 (2005 Result = 1)

Range: 0 – 10 (only one health department reported a percentage above 5)

Health departments reported even less time devoted to this area than in 2005. Almost half the departments surveyed indicated no activity in this area. The time that was spent related primarily to planning application review.

### Communicable Disease Control

Median Percentage = 10 (2005 Result = 10)

Range: 1 – 25

No change in activity in this area has occurred since 2005. The primary activity under communicable disease control continues to be rabies investigation, followed by individual enteric case management. While not significant, it was noted in the results that Ontario health departments did report slightly higher activity ratings for communicable disease than did the other provinces as a whole. This appears to be a result of PHIs not being involved in rabies investigations in some provinces.

### Other Activities

Median Percentage = 1 (2005 Result = 5)

Range: 0 – 15 (most respondents reported less than or equal to 5%)

As in 2005, Other Activities was used as a “catch-all” category in order to condense the survey for ease of response. In general, health departments reported a low level of activity in the activities listed. Emergency response preparedness again scored highest, followed by occupational health issues.

## Expected Competency Questions:

The survey posed five questions to health departments that were designed to screen for expected content knowledge, decision making capacity, investigative and communication skills.

The charts in **Table B** illustrate the responses to these questions compared with those received in 2005. With the exception of a shift downward in expected communication skills, the results from both years are almost identical.

### *Summary of Results for each Competency Question:*

#### Enforcement Decisions

In general, respondents did not expect entry-level PHIs to make major enforcement decisions on their own.

This result suggests that situational questions should test for an understanding of the key issues of the situation and the range of logical solutions that could be applied to them. As well, the response, “I would ask my manager” may be the proper response to some questions.

#### Investigative Skill

Although some respondents expected entry level PHIs to be able to conduct independent investigations, the majority continue to look for a basic to moderate level of ability in this area.

Investigative questions should therefore continue to test for an understanding of basic principles. However, the candidate should also be able to demonstrate the practical application of these principles in a reasonably simple (but not too simple) situation.

### Communication

Respondents appeared to expect a significantly lower level of communication skills than that reported in 2005. Expectations shifted generally from “moderate/thorough” to “basic/moderate” with a number of respondents requiring only basic skills in this area. Unfortunately, the survey structure does not allow for a qualitative assessment of this result. However, despite the result, the current content guide remains relevant. Exam questions should continue to often include communication aspects.

**It may be beneficial however to explore this issue further with employers, perhaps in the context of potential revisions to the written component of the examination.**

### Knowledge of Enteric Infectious Disease

A high level of knowledge of infectious enteric disease continues to be expected of entry-level PHIs.

Questions related to enteric illness should therefore continue to screen for a reasonably specific understanding of both etiology and its relationship to public health interventions.

### Knowledge of Non-Communicable Disease

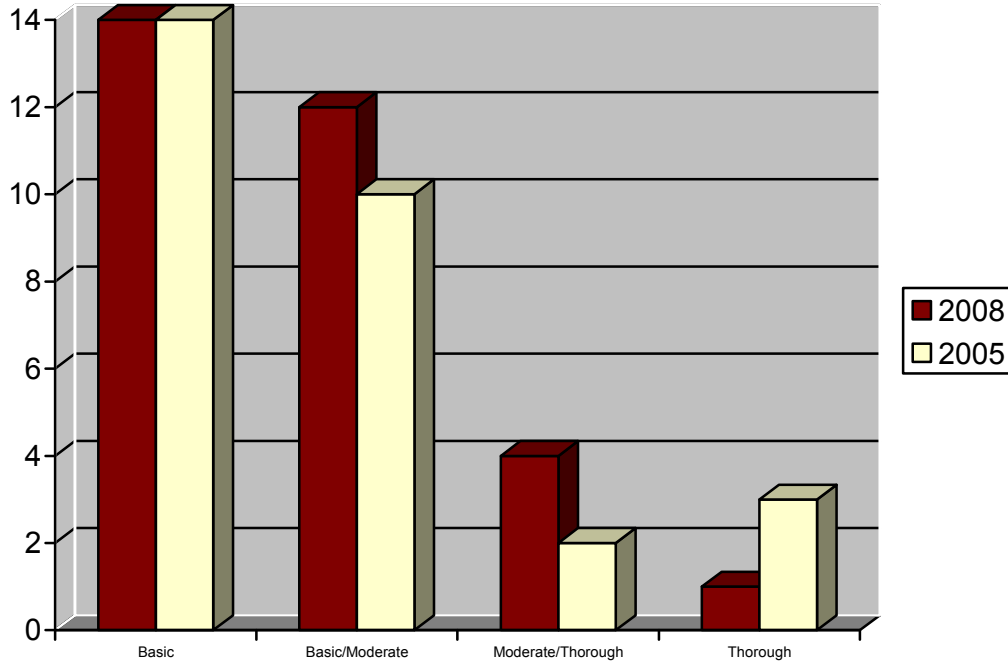
The majority of respondents continue to split their expectations between a basic-moderate and moderate-thorough understanding of non-communicable disease issues. This suggests that questions regarding these issues should test for a level of understanding that at least approaches that expected for enteric disease.

**Table A**  
 Public Health Inspector Entry Level Competency Survey Results  
 Percentage of Time Devoted to Specific Work Areas

|                      | All Health Departments |      |        | > 50% Urban (n=24) |        | >50% Rural (n = 8) |        |
|----------------------|------------------------|------|--------|--------------------|--------|--------------------|--------|
|                      | Range                  | Mean | Median | Mean               | Median | Mean               | Median |
| Air Quality          | 0 - 10                 | 4    | 5      | 5                  | 5      | 3                  | 3      |
| Waste Management     | 0 - 25                 | 6    | 2.5    | 6                  | 2      | 5                  | 2.5    |
| Water Quality        | 1 - 32                 | 16   | 15     | 14                 | 12     | 23                 | 20     |
| Food Safety          | 25 - 72                | 43   | 45     | 46                 | 50     | 38                 | 30     |
| Fixed Premises       | 5 - 40                 | 16   | 10     | 16                 | 10     | 14                 | 10     |
| Land Management      | 0 - 20                 | 2    | 0      | 1                  | 0      | 5                  | 1      |
| Communicable Disease | 1 - 25                 | 10   | 10     | 10                 | 10     | 8                  | 10     |
| Other                | 0 - 15                 | 3    | 1      | 3                  | 1      | 4                  | 1      |

**Table B**  
**Public Health Inspector Entry Level Competency Survey Results**  
**Responses to Expected Competency/Knowledge Questions**  
*(y axis on each graph = number of responses received)*

Enforcement Decisions



Investigative Skill

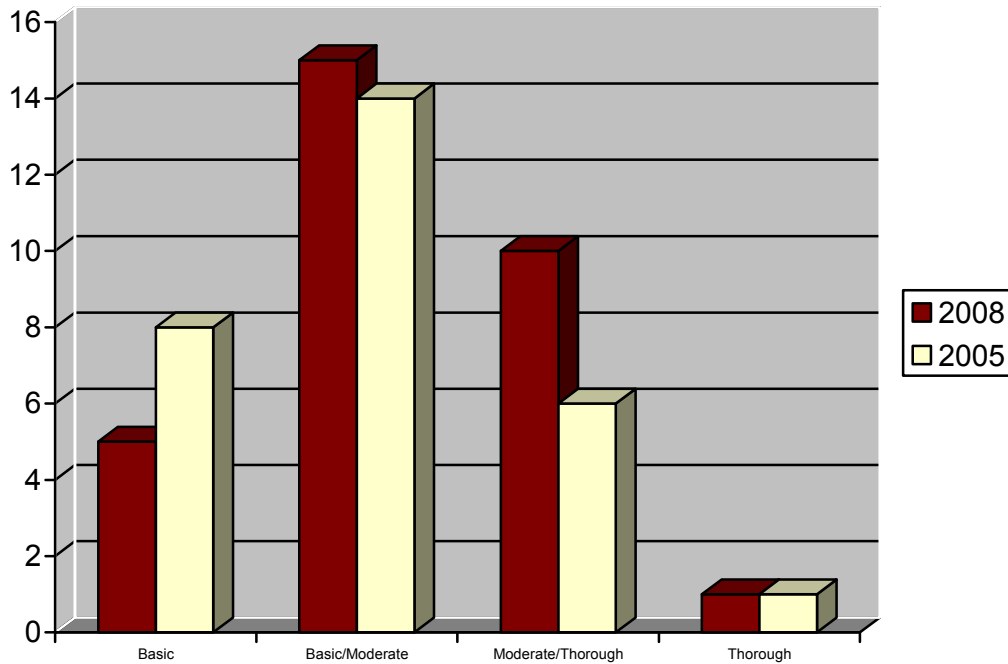
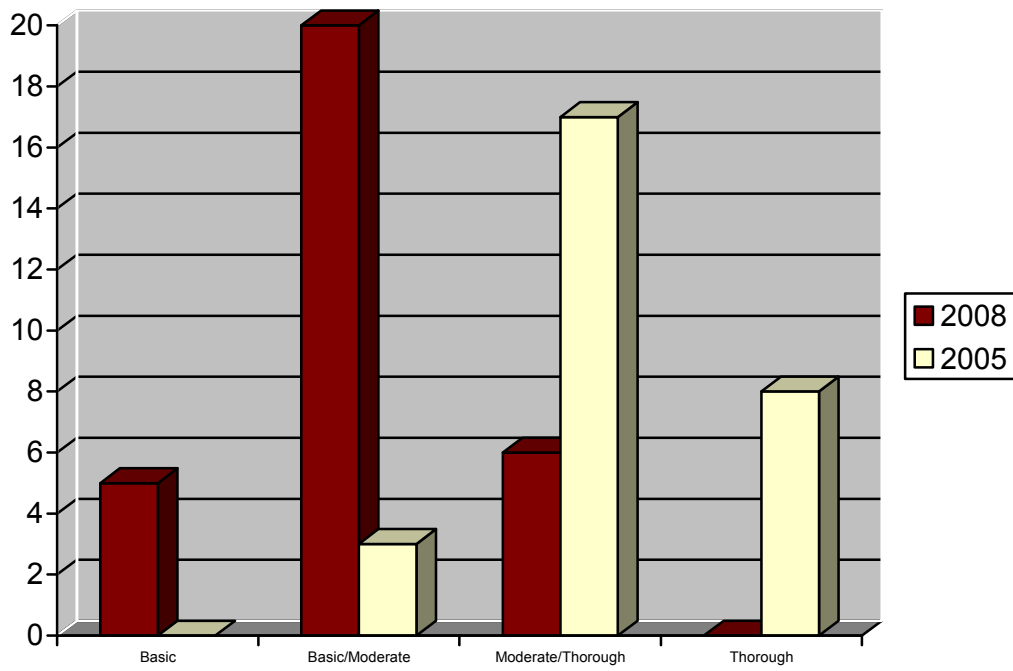


Table B continued

Communication



Knowledge of Infectious Enteric Illness

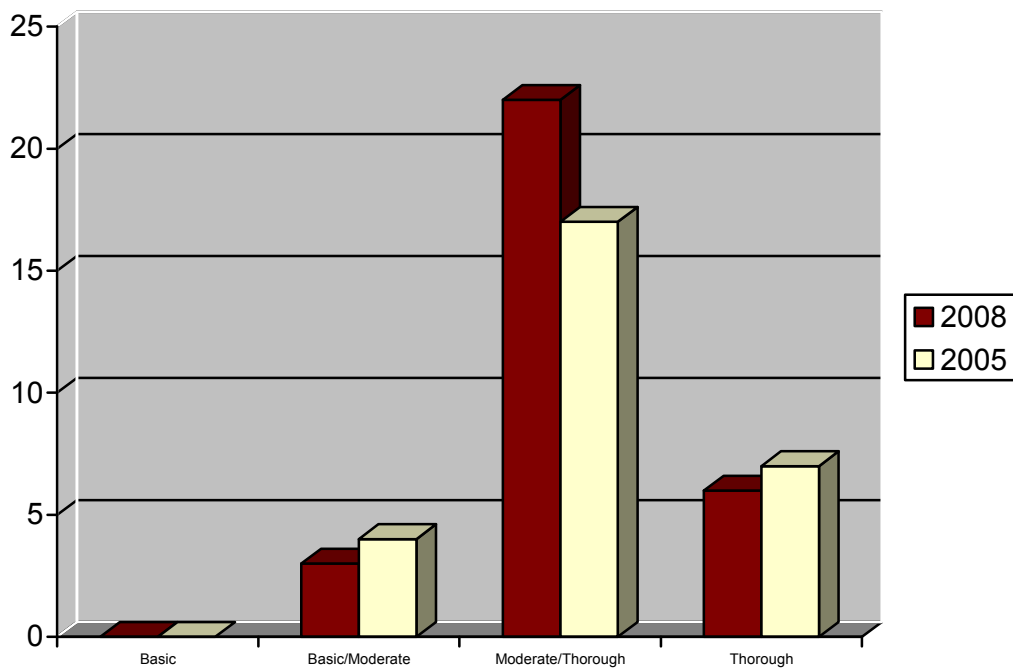
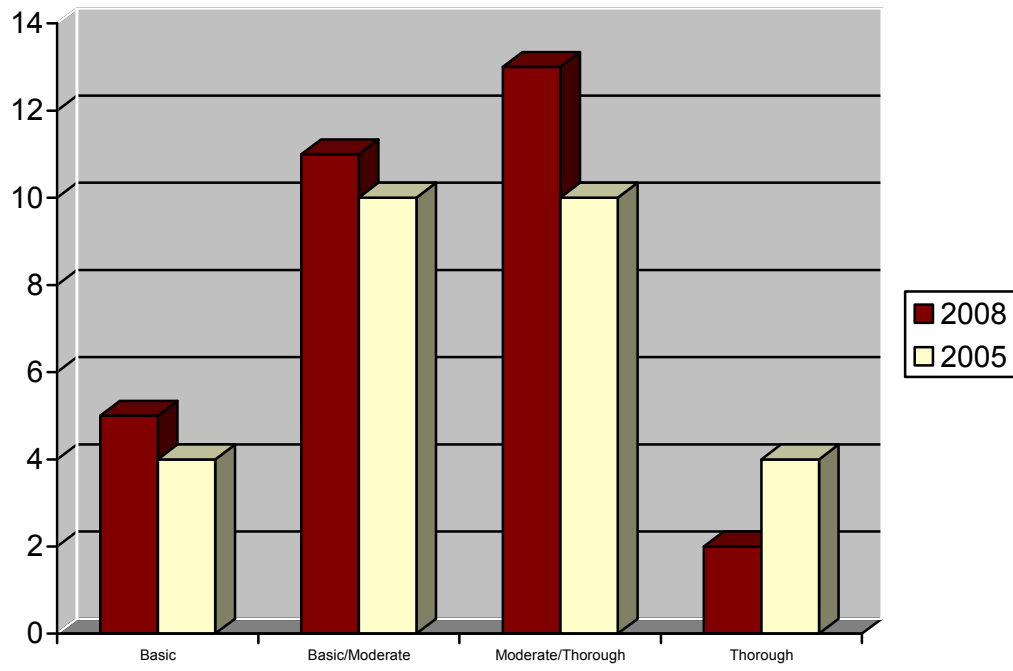


Table B continued

Knowledge of Non-communicable Disease





## APPENDIX A

### Public Health Inspector Entry Level Competency Survey 2008

Dear Colleague:

As part of its strategy to maintain the relevance of examination content, the BOC surveys employers every three years to determine the competency required of entry-level public health inspectors (PHIs). The last survey was completed in 2005. Please assist us in this process by completing this survey.

The survey is divided into the following sections:

- Section 1:** Provides an overview of your department's size and structure
- Section 2:** Provides a prioritized list of the work areas and activities in which an entry level PHI would cover in your department
- Section 3:** Provides information about the level of knowledge and judgement your department expects of an entry level PHI

Those of you who participated in the previous survey will recognize Section 1- 3. In addition, we have included an Addendum **requesting your specific input** on the **written component** of the BOC certification exam. While we recognize that this adds to the length of the survey we felt it was preferable to sending it out separately.

The BOC cannot emphasize enough how important it is that you provide this information. The Certificate in Public Health Inspection is a certificate of qualification and is intended to meet the needs of the provinces, municipalities, federal government, and other employers of qualified Public Health Inspectors.

## SECTION 1: OVERVIEW OF RESPONDING DEPARTMENT

|   |  |
|---|--|
| Name of Department  |  |
| Address   |  |
| Contact Person  |  |
| Contact person's telephone/e-mail:  |  |
| Size of population served by department   |  |
| Approximate ratio of urban to rural areas (by population) served by your department | _____% urban      _____% rural   |
| Approximate number of PHIs employed by department                                   |  |
| PHI Workload Distribution   | <p>___ PHIs work in a “general program” carrying out a variety of traditional inspection duties</p> <p>___ PHIs work in specialized programs (eg. food premises inspections, infection control)</p> <p>___ PHIs work in some combination of general and specialized programs</p> <p>___ Some other arrangement</p> |

If necessary, please use  
this space to elaborate on  
your response above.  
*(expand the table column size as  
needed)*

**SECTION 2: ENTRY-LEVEL PHI WORK AREAS/ACTIVITIES**

*Please Note!* Respondents may recognize that this portion of the survey is based on the BOC’s “Report on Practicum” which records the work experience of PHI interns. However, your responses should reflect what work you require an entry-level certified PHI to perform (as opposed to what training experience you might provide an intern).

| <b>WORK AREAS</b>  | <b>ACTIVITIES WITHIN WORK AREAS</b>   |
|--|---|
| <p>Please record the approximate percentage of the “effective” (non-administrative) time that an entry-level PHI in your department would devote to the work areas/activities below.</p> | <p>Please use the “other” options where an activity you require is not specified. Create additional “others” if needed.</p>   |
| <p><b>AIR QUALITY</b></p> <p><b>overall time devoted to this work area _____ %</b></p>   | <p>Within this work area, please rank the following activities from most to least performed (“1” being most performed)</p> <p>___ investigation of reports of adverse ambient air conditions such as factory emissions</p> <p>___ investigation of reports of indoor air quality in residential housing or institutional settings (including issues related to mould)</p> <p>___ enforcement of legislation related to tobacco use</p> <p>___ education/promotion activities related to air quality</p> <p>___ other, please specify _____</p> <p>___ other, please specify _____</p> |

|   |  |
|---|--|
| <p><b>WASTE MANAGEMENT</b></p> <p>overall time devoted to this work area _____%</p>                                 | <p>Within this work area, please rank the following activities from most to least performed (“1” being most performed)</p> <p>__ issues pertaining to solid waste management</p> <p>__ issues pertaining to private sewage disposal</p> <p>__ issues pertaining to municipal sewage disposal (including bio-solids utilization)</p> <p>__ issues pertaining to hazardous industrial waste disposal</p> <p>__ other, please specify _____</p> <p>__ other, please specify _____</p>   |
| <p><b>WATER QUALITY</b></p> <p>overall time devoted to this work area _____%</p> <p><b>WATER QUALITY cont'd</b></p> | <p>Within this work area, please rank the following activities from most to least performed (“1” being most performed)</p> <p>__ investigation/management of issues related to <b>private</b> water supply events</p> <p>__ investigation/management of issues related to <b>municipal/other communal</b> water supply events</p> <p>__ education/promotion activities related to drinking water quality</p> <p>__ investigation/management of issues related to recreational water quality (including beach sampling/advisory programs)</p> <p>__ other, please specify _____</p> <p>__ other, please specify _____</p> |

**FOOD SAFETY**

**overall time devoted to this work area** \_\_\_\_\_%

Within this work area, please rank the following activities from most to least performed (“1” being most performed)

\_\_ inspection/enforcement activities related to commercial/institutional food premises

\_\_ HACCP-related activities in food service operations

\_\_ HACCP-related activities in food processing operations

\_\_ provision of food handler training/education to commercial food service workers

\_\_ education/promotion activities targeted to the public

\_\_ other, please specify \_\_\_\_\_

\_\_ other, please specify \_\_\_\_\_

**FIXED PREMISES INSPECTIONS (non-food)**

**overall time devoted to this work area \_\_\_\_\_%**

Within this work area, please rank the following activities from most to least performed (“1” being most performed)

\_\_ inspection/enforcement activities related to public swimming pools

\_\_ inspection/enforcement activities related to childcare facilities and institutions

\_\_ inspection/enforcement activities related to personal service settings

\_\_ inspection/enforcement activities related to summer camps, campgrounds, migrant worker housing and other seasonal operations

\_\_ inspection/enforcement activities related to substandard residential housing (including sanitation and pest infestations)

\_\_ education/promotion activities related to fixed premises

\_\_ other, please specify \_\_\_\_\_

\_\_ other, please specify \_\_\_\_\_

|   |   |
|---|---|
| <p><b>LAND MANAGEMENT</b></p> <p>overall time devoted to this work area _____%</p>              | <p>Within this work area, please rank the following activities from most to least performed (“1” being most performed)</p> <p>___ development plan review and comment (eg. residential rural subdivisions)</p> <p>___ research associated with development plans (eg. sanitary surveys)</p> <p>___ other, please specify _____</p> <p>___ other, please specify _____</p>   |
| <p><b>COMMUNICABLE DISEASE CONTROL</b></p> <p>overall time devoted to this work area _____%</p> | <p>Within this work area, please rank the following activities from most to least performed (“1” being most performed)</p> <p>___ investigation/management of potential rabies exposures</p> <p>___ follow-up of individual cases of enteric disease</p> <p>___ follow-up of individual cases of non-enteric disease</p> <p>___ management of community/institutional outbreaks</p> <p>___ education/promotion activities related to fixed premises</p> <p>___ other, please specify _____</p> <p>___ other, please specify _____</p> |

**OTHER ACTIVITIES**

**overall time devoted to other work not specified in the above categories \_\_\_\_\_%**

Within this work area, please rank the following activities from most to least performed (“1” being most performed)

\_\_\_ issues pertaining occupational health

\_\_\_ issues pertaining to emergency preparedness

\_\_\_ issues pertaining to environmental health advocacy and community development

\_\_\_ other, please specify \_\_\_\_\_

\_\_\_ other, please specify \_\_\_\_\_

\_\_\_ other, please specify \_\_\_\_\_

\_\_\_ other, please specify \_\_\_\_\_

### SECTION 3: EXPECTED CAPABILITIES OF ENTRY-LEVEL PHIs

The following statements are designed to gauge the degree of knowledge expected of entry-level PHIs and/or the level of judgement they are expected to exercise. Because it's not possible to cover all conceivable issues addressed by all the departments surveyed, a selection of core environmental health issues/activities (ie. ones likely common to most health departments) have been incorporated into these statements.

For each of the statements select the completing phrase that most indicates your expectation for an entry-level PHI (think of the capabilities you would want to see in a newly hired PHI who has been fully briefed on your department's policies and procedures). Please skip any statements that are totally unrelated to your department's mandate/activities or make use of the "some other phrase" selection if none of the others are appropriate.

I expect an entry level PHI would.....

- consult his/her manager before taking any enforcement action during the inspection of a premise.
- consult his/her manager only when taking serious enforcement action such as closure.
- consult his/her manager only in highly unusual circumstances during an enforcement action.
- some other phrase (please state) \_\_\_\_\_

I expect an entry level PHI to.....

- be familiar with the fundamental components of an investigation
- be able to play an active, but junior, role in an investigation
- be able to work independently in an investigation.
- some other phrase (please state) \_\_\_\_\_

I expect an entry level PHI to.....

- be able to effectively communicate basic information/directions to members of the public (eg. rabies confinement procedures)

- be able to effectively explain somewhat complex issues to members of the public (eg. risk factors associated with a communicable disease)
- be able to effectively communicate complex and/or contentious issues to the public (eg. potential health effects related to local groundwater contamination)
- some other phrase (please state) \_\_\_\_\_

In that much of environmental health work relates in some way to enteric illness, I would expect an entry level PHI to.....

- be familiar with the names of the key enteric pathogens routinely encountered in Canada.
- have a general understanding of the etiology of the disease caused by these pathogens.
- have a reasonably specific understanding of both etiology and its relationship to public health interventions (eg. knowledge of recent outbreaks, implicated vehicles of spread and effective control measures)
- have a thorough understanding of these pathogens enabling him/her to initiate case follow-up/outbreak investigation.
- some other phrase (please state) \_\_\_\_\_

In that non-communicable disease issues are also a key aspect of environmental health work, I would expect an entry level PHI to....

- be aware of the existence of non-communicable diseases commonly associated with environmental exposures (egs. respiratory illness associated with adverse air quality; illness related to exposure to lead).
- have a general understanding of the etiology of these diseases.
- have a reasonably specific understanding of both etiology and its relationship to public health interventions.
- have a thorough enough understanding of these diseases to participate in related interventions.
- some other phrase (please state) \_\_\_\_\_