

Phase II Questionnaire Results

Introduction

Four questionnaires were sent to New Hampshire communities regarding Phase II. The first went to Town Managers/Administrators and/or Mayor's offices and asked questions related to budgeting and assignment of responsibility. Since most questionnaires by direct mail typically receive only a 1-3% response rate, the response rate was fairly high at 10%.

The second went to Directors of Public Works and/or Town Engineers or Highway Superintendents depending on the community. This questionnaire asked about physical facilities, such as the number and cleaning methods for catch basins, and information about needs and budgeting. CEI received a 6% response rate to this questionnaire.

The third questionnaire went to Town Planners or Planning Board Chairmen, depending on the community. This questionnaire asked about existing bylaws and regulatory issues related to Phase II. The response rate was excellent at 12%.

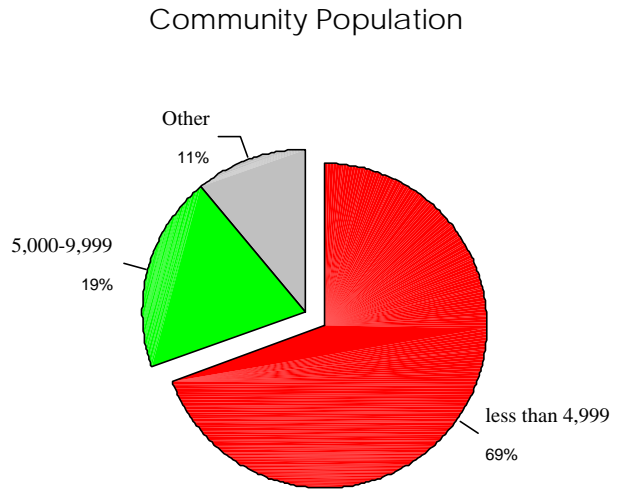
The final questionnaire went to Boards of Health, typically to the agent/officer, and requested information on illicit discharge handling and on impacts the BOH's had seen on water quality at beaches from storm drain discharges. A very high response rate of 20% was received.

Together, the answers to the questionnaires from each department give a fairly comprehensive picture of the level of understanding and some of the issues related to Phase II implementation. The results are described and shown pictorially below by question.

Questionnaire 4: Board of Health Agents/Officers

Question #1: Health Agents/Officers, what is your total community population?

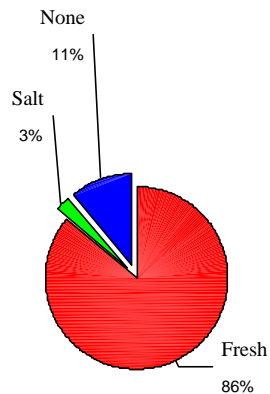
69% of the responses came from communities with populations of less than 69%. 19% were from communities with populations of 5,000-9,999. Only 11% of the responses came from communities with populations of greater than 10,000.



*Due to software constraints, figures may not add up to 100%

Question #2: Health Agents/Officers, what types of beaches do you have?

Types of beaches



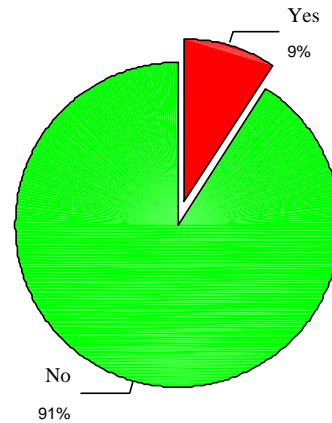
The respondents were dominated by communities with fresh water beaches (86%). Those with saltwater beaches composed only 3%. 11% of respondents reported having no beaches at all within their community.

The beaches questions were designed to better understand communities' water resources and impacts from stormwater. Many beach closures are caused by stormwater impacts, and EPA released new criteria in 2000 reflecting the influence of stormwater on beach closures in both fresh water and saltwater.

Question #3: Health Agents/Officers, were there beach closures in 2000?

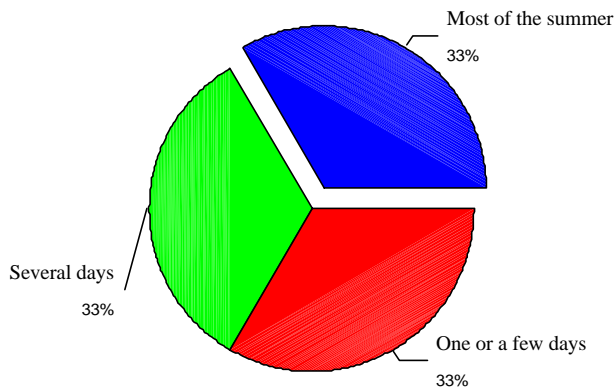
This question asked how many respondents with beaches in their community had beach closures in the year 2000. The purpose of this question was to identify the number of beaches subject to closure and possible contributing factors. Some of these factors might include the techniques used to assess whether the closure is needed and proximity to storm drainage systems. 91% of the respondents had not had any beach closures in 2000, while 9% did have closures.

Were there beach closures in 2000?



If you had closures, how much of the bathing season was affected?

Length of beach closure



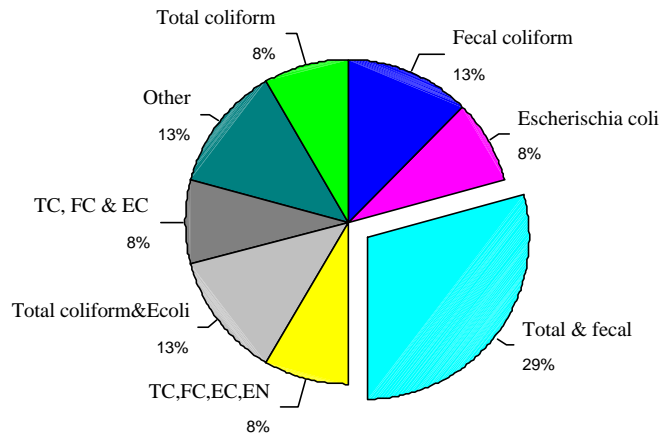
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Of those communities with beach closures, 33% had only one or a few days of closure, while equal percentages were closed either for several days or for most of the summer. Considering the wet year that occurred during 2000, frequent closures indicated that there are either serious bacterial contamination issues, probably from sewage, or that highly non-selective testing techniques, such as total and fecal coliform, are used alone. Since these testing techniques can indicate non-pathogenic vegetative bacteria sources, some beaches may be closed needlessly.

Question #4: Health Agents/Officers, what criteria do you use for evaluating whether to close FRESH WATER beaches?

Of those respondents to the survey who have fresh water beaches, about half still use antiquated criteria such as total coliform (TC), fecal coliform (FC) or some combination of the two. These tests, while widely used for many years, have been found to be relatively inaccurate. 13% of respondents use a combination of total coliform and *E. Coli*, (EC) while 8% use *E. Coli* as their sole criteria for beach closure. 16% of the respondents reported using some combination of total and/or fecal coliform, *E. Coli* and *Enterococcus* (EN). EPA recommends that *E. Coli* be used for fresh water beach closure assessment and that *Enterococcus* be used for saltwater beach closure assessment. These criteria are far more accurate and in many cases, may actually result in fewer closures since the total and fecal coliform criteria tend to be inaccurate and include many non-pathogenic bacteria.

Closure criteria for fresh water beaches



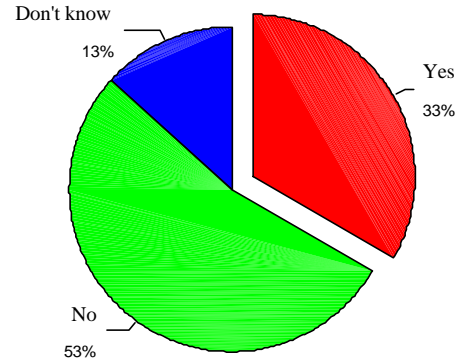
Question #5: Health Agents/Officers, what criteria do you use for evaluating whether to close SALT WATER beaches?

Of the 3% of the respondents who reported having salt water beaches, all reported using total coliform for their closure criteria. While this has been a popular method of evaluation in the past, new studies suggest that *Enterococcus* is a much more accurate closure criteria. EPA suggests that communities begin turning to *Enterococcus* for their salt water testing.

Question 6: Health Agents/Officers, are there storm drains near any of the beaches?

Because proximity to storm drains has been implicated in beach closures, we asked Health Agents/Officers whether they had storm drains near their beaches. 33% said that they have storm drains near the beaches. 53% said there are no storm drains and 13% did not know whether there were storm drains in close proximity to the beach. It is likely that those Agents/Officers who did not know whether there are storm drains near the beaches have not looked at this because they have not had beach closures. CEI recommends that storm drains be investigated first when beach closures occur. In many cases, the problem can be remedied to reduce closures. Analytic techniques, discussed later in the survey, are also important.

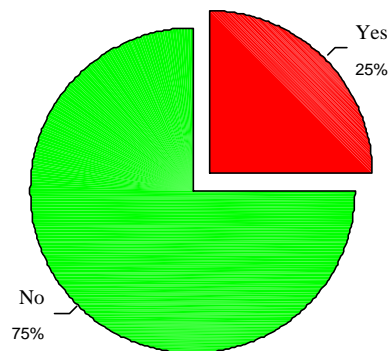
Are there storm drains near the beaches?



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Have steps been taken to address storm drains near beaches?

Were steps taken to address storm drainage?



Only 25% of the Health Agents/Officers have reported having addressed storm drainage as a cause of their beach closures. This is not particularly surprising considering the correlation between storm drains and beach closures is a fairly new discovery. As time goes on, CEI expects that more storm drainage corrections will be made to prevent beach closures in the future.

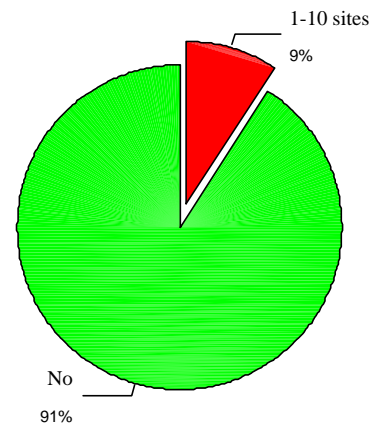
Question #7: Health Agents/Officers, have you seen EPA's Beaches Report?

Of the total number of respondents who answered the survey, none reported having seen the EPA Beaches Report. The report was issued last year by EPA and concerns testing techniques important to beach closures. Many of the testing techniques reflect the type of criteria that are important in storm drainage as well. CEI has sent copies of the report to respondents who requested it. Copies are still available from CEI by mail or e-mail, or can be requested from EPA.

Question #8: Health Agents/Officers, have you ever investigated illegal connections to storm drains?

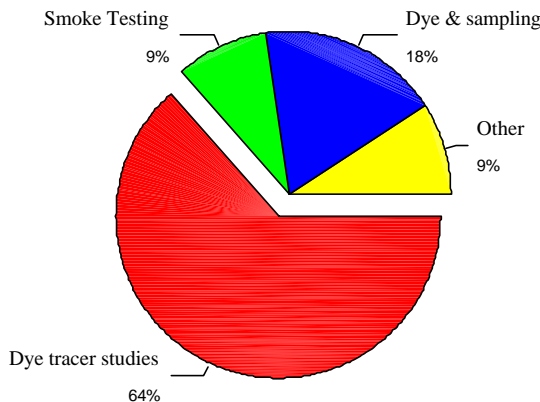
9% of the respondents reported having investigated between 1-10 illegal storm drain connections in the past. 91% had not, perhaps because they have not had cause to do so. In smaller communities with minimal storm drainage systems, illegal connections are less common. In unsewered areas, the illegal connections might be septic systems connected into the storm drain system and this is particularly common where high groundwater is an issue. In more urban areas, illegal connections may be difficult to track down.

Investigation of illegal storm drains



Question 9: Health Agents/Officers, if you have investigated illegal discharges, what have you found to be the best techniques?

Best technique for investigating illegal discharges



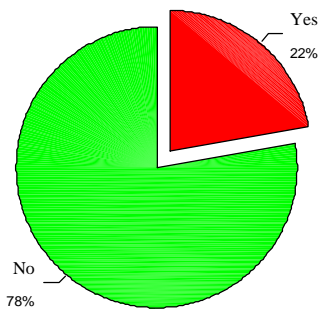
While the large majority of beach closures are believed by EPA to be caused by stormwater, some other significant components of beach closures are caused by illicit connections. This is, in part, the reason for the illicit connections efforts under Phase II. We asked Health Agents/Officers what they felt was the best technique for investigating illegal connections. Of the total number of respondents, 64% have successfully

used dye tracers. Another 18% have used a combination of dye tracers and sampling upstream of the contamination to locate the illicit discharge. 9% of the respondents reported using smoke testing, while an equal number used “other” techniques including optical brightener testing, other miscellaneous types of investigation or neighborhood complaints. None of these methods individually totaled more than 5% usage, so they were combined under the “other” category.

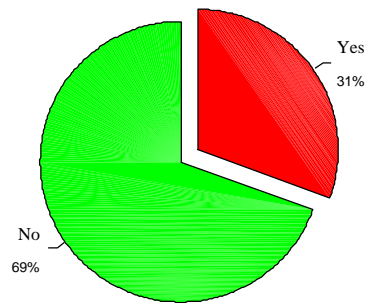
Question #10: Health Agents/Officers, would additional assistance be helpful? If so, what kind would be most beneficial?

53% of the respondents indicated that some form of technical assistance would be helpful. As shown on the graphs below, workshops on tracing illicit discharges (22%) and general workshops (31%) were among the most popular options. 11% of respondents felt one-on-one technical assistance would be beneficial, while 6% suggested other forms of support, such as information on current regulations or guidelines or assistance from the State in prosecuting violators, would be the most helpful.

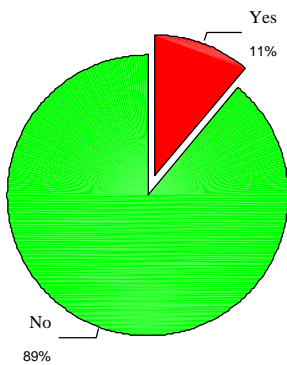
Workshops on tracing illicit discharges



General workshops



One-on-one technical assistance



Other assistance

