



Canadian Institute of Public Health Inspectors

L'Institut Canadien des Inspecteurs en Hygiene Publique

It gives us great pleasure in forwarding to you, on behalf of the Saskatchewan Public health Association & the Canadian Institute of Public Health Inspectors, the position document on “Environmental Health in Saskatchewan: Forging a Provincial Strategy”. This document is a result of a consultative process by environmental health professionals in Saskatchewan.

Environmental Health has become a leading focus for public health in Canada over the last few years. Well-publicized outbreaks related to water and foods have heightened public awareness. Judicial and other enquiries have highlighted issues facing a diverse, multi-stakeholder sector.

This policy document attempts to address the challenges facing environmental health at three levels:

1. Reorienting the profession to be proactive while using a risk based approach to enforcing regulations.
2. Involving communities in health education and promotion and an appreciation of risk assessment.
3. Engaging other sectors and stakeholders through advocacy and dialogue so that environmental issues are addressed before they become environmental health issues.

We would be grateful if, upon reviewing the document, you would send your comments to the undersigned.

Thank you,

Joan Riemer

Please send comments to: jriemer@sasktel.net

Or Mail to: Saskatchewan Public Health Association

P.O. Box 845

Regina, Saskatchewan S4P 3B1





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ENVIRONMENTAL HEALTH IN SASKATCHEWAN

Forging A Provincial Strategy



[Saskatchewan Public Health Association](#)

February 2002

ENVIRONMENTAL HEALTH IN SASKATCHEWAN FORGING A PROVINCIAL STRATEGY

Part I – Introduction:

In March 1999 the Saskatchewan Public Health Association and the Saskatchewan Branch of the Canadian Institute of Public Health Inspectors identified the need to review the state of environmental health in Saskatchewan, particularly the relevancy of current public health inspection/environmental health officer programs administered by health districts and other public health agencies in the province. Both the Association and the Institute recognize the important contributions of public health agencies employing public health inspectors and other health professionals have made in such areas as food and water safety, communicable disease control, and health hazard abatement. Indeed, the tragedy of Walkerton and the recent cryptosporidium outbreak in North Battleford should be a reminder to all that something so basic as water requires ongoing vigilance to ensure safety.

However, without compromising key elements of traditional programs that have proven so effective in terms of protecting public health, public health agencies must recognize that the world continually changes and with these changes new challenges arise. This is true for environmental health as well. Broad environmental health issues such as climate change, biodiversity and public health threats related to antibiotic resistance, large scale processing and transportation of food are only a few examples of issues that confront public health and other agencies. Add to this an increase in the health inspector's workload and you have many public health inspectors rethinking the traditional service and inquiring whether they are well positioned to meet new challenges and at the same time maintain a level of service in traditional program areas to ensure past threats do not re-emerge. It is in this light that Saskatchewan Public Health Association and Saskatchewan Branch of the Canadian Institute of Public Health Inspectors felt it important to review the current professional practice of public health inspectors in Saskatchewan and make recommendation to employers, policy makers, professional associations and training schools on actions they can take to assist public health inspectors in meeting new public health challenges effectively.

Part II - Background:

(a) Process

The Environmental Health Strategy Committee was made up of the following members representing the agencies/professional associations as indicated:

Jane Lyster	Saskatchewan Public Health Association
Robin Galbraith	Canadian Institute of Public Health Inspectors – Saskatchewan Branch
Louis Corkery	Saskatchewan Health - Population Health Branch
Tim Macaulay	Saskatchewan Health – Population Health Branch
Paul Silvester	Sr. Public Health Inspector – Moose Jaw-Thunder Creek Health District
John Prince	Public Health Inspector – Midwest Health District
Howard Masters	Environmental Health Officer – Prince Albert Grand Council
Rita Dash	Board Member – Moose Mountain Health District

Charlene Logan Board Member – Mamawetan/Churchill River Health District
Donna Wolfe Health Educator – South Central Health District

*** Note:** While the Committee was not able to acquire ongoing participation of a representative from the Medical Health Officers' or CEO's group, it did obtain feedback on recommendations from a medical health officer representing the Medical Health Officers Committee of Saskatchewan.

This Working Group began meeting in September 1999 with the plan to complete the strategy within 2 years.

Meetings were held three to four times a year, with each meeting approximately one and a half days duration. Working groups within the committee were sometimes used. Decisions and actions of the committee were based on consensus.

The draft recommendations were shared with a preliminary list of stakeholders including Saskatchewan Environment and Resource Management (SERM), Saskatchewan Agriculture and Food, Medical Health Officers, Safe Drinking Water Foundation, Senior Public Health Inspectors and Environmental Health Officers. Input from these groups was incorporated into the draft document circulated to a larger group of stakeholders (see Appendix A) in May 2001.

The final committee meeting was held in June 2001 to discuss and incorporate comments received from stakeholders into this final document. It is hoped that the Saskatchewan Public Health Association and the Saskatchewan Branch of the Canadian Institute of Public Health Inspectors will endorse and promote the recommendations of this committee.

(b) Environmental Health Defined

In *The Public Health Act, 1994*, "environmental health" means the aspect of public health that is concerned with the forms of life, substances, forces and conditions in the surroundings of human beings that may exert an influence on human health and well-being.

The practice of environmental health covers the assessment, correction, control and prevention of environmental elements that have the potential to adversely affect human health. This includes all measures necessary to deal with hazards in our environment, which threaten human health, such as contaminated water and food, chemical exposures, polluted air and soil, and vector borne diseases. While environmental health is a multidisciplinary field ranging from engineering to epidemiology, environmental health as practised within health districts and Saskatchewan Health is largely carried out by medical health officers and public health inspectors with some epidemiological support.

Further, within the context of Saskatchewan, services related to environmental health are viewed as being one of several services under the heading of public health services. "Public health services" is defined in *The Public Health Act, 1994* as "programs and services that prevent or limit disease or disability, that protect, promote and restore health or that contribute to achieving goals for the health of the population". Hence, environmental health is viewed as one component in the larger practice known as public health.

Environmental health should not be confused with environmental protection. Environmental health considers those environmental factors that have or could have more immediate effects on human health, while environmental protection looks at broader issues related to ecosystem health, biodiversity, climate change and a general ecological sustainability. Environmental protection efforts, of course, affect human health but generally more indirectly and in the longer term. A key department in Saskatchewan responsible for environmental protection is Saskatchewan Environment and Resource Management.

(c) History of Public Health Inspection in Saskatchewan

Before 1930 there were four sanitary officers based in Regina who provided inspection duties for the entire province. The Sanitary Officers worked for the Division of Sanitation, Department of Public Health.

In 1930 eight district offices were established. Priorities for the sanitary officers were safe water supplies, proper disposal of sewage, healthy school environments, safe food production, safe milk supplies, communicable disease prevention, safe accommodations, rural plumbing installations, proper solid waste disposal and insect and rodent control.

In 1946 the first health region, Health Region #1, was formed in Swift Current. Between 1946 and 1961 the rest of the province, not including northern Saskatchewan, was organized into 10 health regions. The formula for staffing each Health Region was one senior sanitary officer and additional sanitary officers at the rate of one to approximately 15,000 population. While the health regions were forming the sanitary officers duties were increasing. They now assumed responsibility for plumbing in villages, towns and cities. Substandard housing became more of an issue and many buildings were placarded and demolished. Rabies control and mosquito control programs were established.

Up until 1965 the educational requirements were met through a correspondence course that was completed over a one year span while the inspector trained in a health region. During this period annual in-service programs at the University of Saskatchewan were organized. The first of these three-week sessions was held in 1955. Although the length of the in-service has gradually decreased over the years it is still an important component of the public health inspectors' continuing education.

In the mid 60's Ryerson Polytechnical Institute in Toronto developed a one-year program, which was soon increased to a two-year course. By 1969 the British Columbia Institute of Technology also developed a two-year course.

In the years between 1961 and 1974 the health regions were largely autonomous. The executive director of the Regional Health Services Branch or the Director of the Division of Sanitation provided provincial direction. There was no public health inspector position at Central Office until 1966. Central Office established general guidelines and minimum standards but there was little direction of actual programs delivered by the regions. The regions generally conducted their own affairs, partaking in activities that were of special interest or concern to them.

In the late 50's it was recognized that Saskatchewan had the highest percentage of non-modern farm homes in Canada. There were also many small communities that lacked proper sewage and water systems. Initiatives such as the Family Farm Improvement Branch offering grants and technical assistance had a considerable impact. During the 60's thousands of plumbing, sewage and water systems were inspected. By 1971 Saskatchewan had the highest percentage of modern farm homes.

Other significant trends in this era included the construction of swimming pools and indoor arenas in small communities and a proliferation of mobile homes. Knowledge of swimming pool operation, water chemistry, carbon monoxide monitoring and subdivision planning became essential.

In 1964 the title of Sanitary Officer was dropped in favor of Public Health Inspector. In 1965 the surveillance of milk production and delivery was transferred to the Department of Agriculture along with three positions. Only one position remained with responsibility for milk pasteurization plants.

Prior to 1965 the Division of Sanitation issued permits for municipal sewer and water systems. In 1965 the Water Resources Commission (which later became part of the Department of the Environment) assumed these responsibilities. It was agreed that Public Health Inspectors would continue to inspect the municipal facilities in exchange for technical assistance on swimming pools as well as private sewage and water systems.

Public Health Inspectors were very much involved in the communities they served. Sanitary surveys were conducted yearly to assess such things as waste disposal and the general cleanliness of residential and commercial properties. Inspectors regularly attended municipal council meetings to address public health concerns. They also promoted bylaws concerning such things as plumbing, keeping of livestock and the sale of unpasteurized milk.

During the 1970's and early 80's program development and direction became more centralized. Health regions, health region boards and local boards of health still had legal standing. It was recognized that community members had to deal with unique health problems at a local level. However, there was a need for a more consistent approach across the province when dealing with other government agencies, industries and commercial enterprises that operated in several or all of the 10 Health Regions. Regularly scheduled senior public health inspector meetings identified common ground and helped to reconcile differences between provincial and regional interests. Another position was created in central office to deal with the ever-increasing workload.

Some of the provincial initiatives during this period were the development of education programs for eating establishment workers and swimming pool operators. Waste Management Regulations were passed in 1972 with the objective of proper waste disposal sites in all municipalities by 1974. The Shoreland Pollution Control Regulations were passed in 1976 to protect ground and surface water supplies. Liquid waste haulers also required permitting. All of these initiatives required an enormous amount of the inspectors' time. Other pressures during this period were increasing numbers of fast food outlets, intensive livestock operations, subdivisions and tourist facilities. In addition inspectors responded to public concern over the hazards of leaking microwave ovens and urea formaldehyde foam insulation.

In 1981 the Public Health Inspector Information System (PHIIS) was introduced. It was one of the first computerized inspection record keeping systems in Canada.

Starting in 1984 there was a government initiative to downsize. An early retirement package eliminated five positions. Four more positions were lost when municipal water, sewage, and solid waste as well as liquid waste transport responsibilities were transferred to Saskatchewan Environment. Health Regions were twinned which meant that two regions were served by one senior public health inspector.

One Public Health Inspector 2 position had been created in each health region in the early 80's. By the late 1980's staff shortages reached a critical level and drastic measures were required. In addition to a recruitment campaign in Britain, all of the Public Health Inspectors were reclassified to the PHI 2 level to make their salaries more competitive with other provinces. As vacant positions were filled it became possible to return to the full complement of one senior public health inspector in each health region.

In 1995 the 10 health regions were dissolved with the formation of 30 health districts. Northern Health Services Branch followed suit in 1998 with the creation of the three northern districts. During this time the central office staff was reduced from three positions to two. Public Health Inspectors now work for the 11 host health districts that provide services to their partner districts.

Educational requirements, as well as the number of colleges offering environmental health courses, have increased. Public Health Inspectors are required to have a degree before the Canadian Institute of Public Health Inspectors will certify them.

(d) Environmental Health - Agency Roles

(i) Saskatchewan Health - From an environmental health perspective, Saskatchewan Health is responsible for developing public health legislation and regulations and facilitating and coordinating use of inter-health district standards, guidelines and policies related to environmental health. It provides public health advice to government departments, health districts, and others as well as collaborates with appropriate Federal government departments on public health issues affecting the province. The department's Provincial Laboratory supports health district disease surveillance and investigation activities by providing clinical testing and conducting analyses on water, food and other media.

(ii) Health Districts – Health district boards are appointed the “local authority” under *The Public Health Act*. As such they are responsible for providing public health services and programs “that prevent or limit disease or disability, that protect, promote and restore health or that contribute to achieving goals for the health of the population”.

(iii) First Nations and Inuit Health Branch (FNIHB) – FNIHB works with First Nations and Inuit people to improve and maintain the health of aboriginal peoples. It provides health services to status Indians living on reserve, communities in the territories, and the Inuit peoples through community-based nursing stations, health centres, and other health facilities in isolated and remote areas.

(iv) Professional Associations

CIPHI (Canadian Institute of Public Health Inspectors) is the only professional association representing public health inspectors and environmental health officers in Canada. It certifies persons entering the field to a required professional standard as well as providing ongoing opportunities for professional development. CIPHI plays an advocacy role in protecting the health of all Canadians on environmental issues.

SPHA (Saskatchewan Public Health Association) is a voluntary organization incorporated in 1980. It is affiliated with the Canadian Public Health Association. SPHA members are individuals from a wide variety of professional health backgrounds including community health nurses, health educators, public health inspectors, medical health officers, nutritionists, educational psychologists, podiatrists, community program planners, project co-ordinators, health administrators and concerned citizens. The mission of SPHA is to promote the health of Saskatchewan people and their environment through education, advocacy and empowerment.

(v) Training Schools - There are currently 4 accredited training schools for public health inspectors/environmental health officers in Canada including British Columbia Institute of Technology, Ryerson Polytechnical University, University College of Cape Breton and Concordia University. Saskatchewan Indian Federated College has undergone an accreditation review and is awaiting results from the Board of Certification of CIPHI. Only graduates of accredited environmental health programs are permitted to sit the qualifying exam to become a certified public health inspector.

(e) Challenges

The following issues and challenges were identified in an attachment to the March 1999 stakeholder letter initiating participation on the Environmental Health Strategy Committee, herein called the Committee.

Narrow Understanding of Environmental Health

- Without a clear and definitive environmental health strategy/role, outside agencies will continue to download programs/activities onto environmental health agencies.
- Many environmental health professionals have a narrow view of environmental health focusing on the absence of disease or other physical problems. As a result, opportunities to participate in programs such as community sustainable development initiatives, where environmental health can play an active role, are missed.
- Many Health District Boards have a limited understanding of environmental health, which impacts on the potential for maintaining/obtaining funding for existing/proposed programs.

Work Load Demand

- Legislative/regulatory requirements, such as inspections and licensing/permitting functions, restrict the ability of environmental health agencies to implement new programs.
- Additional workload caused by agencies whose programs require environmental health involvement or whose programs have been diminished to the point that environmental health agencies become involved by default is increasingly taxing to existing environmental health resources.

Need to Review Regulatory Mandate and Core Services

- Currently there is no mechanism to determine whether local authorities (e.g. host health districts) meet regulatory mandates.
- There is no clear articulation of province wide core environmental health services.

Habitat Trends

- Increasing population movement into urban centres, which creates challenges to existing infrastructure (e.g. housing and land development issues).

Need for Implementation of Risk Management and Population Health Approaches

- Many environmental health programs and resource activities continue to be driven by regulations and policies that focus on areas of little risk.
- Risk management models/frameworks for dealing with environmental health issues are not established at local or provincial levels.
- Population health promotion models are not being used or considered when reviewing or developing environmental health programs.

Optimal Use of Resources

- Although the field of environmental health is very broad, agencies that administer these programs are limited by the lack of resources.
- There is no risk based prioritization method that would assist environmental health agencies in maximizing usage of existing resources in areas of greatest concern.

Skill Development

- Environmental health professionals generally cannot effectively address population health goals without possessing skills in the areas of community development, risk assessment, decision making, health promotion, collaboration, needs assessment, evaluation, research, science, etc.
- Limited or no funding is available for developing skills among environmental health professionals.

Part III - Values and Recommendations:

Because any decision to revitalize government-funded environmental health programs and services in the health districts rests with Saskatchewan Health and the district health boards, we are suggesting that they consider our recommendations which, if accepted, will form the basis of a strategy for environmental health in the province. As well, recognizing that professional associations, training schools, and other agencies can influence change, we have directed several recommendations to them. If the department and health districts choose to move forward with these recommendations as part of an environmental strategy we ask that the strategy be guided by the following principles identified in Australia's Environmental Health Strategy:

(a) Protection of Human Health

Environmental health aims to protect human health by identifying potential threats posed by environmental hazards as early as possible and introducing appropriate safeguards, which ideally are sustainable and cost-effective.

(b) Interrelatedness of Economics, Health and Environment

Economic development, human health and environmental protection are inextricably linked. It is important that economic development proceed hand-in-hand with measures to protect the environment and promote high standards of environmental health. Socioeconomic status is also a key determinant of health.

(c) Sustainability.

Good environmental health requires that the environment be managed in a sustainable way.

(d) Partnership

The general public, local, government, health district and First Nations, government agencies, industry and business organizations, non-government organizations, the health and scientific communities need to work together in planning, implementing and evaluating environmental health policies and programs.

(e) Use of multiple approaches

Different or multiple approaches should be canvassed in preventing and solving environmental health problems.

(f) Risk management

Risk management means identifying existing or potential environmental threats to human health, and the possible adverse effects on people, communities and economic interests. It includes determining the likely impact of those threats (including their economic and social costs) and developing and implementing strategies for preventing, minimizing or removing each identified threat and actions to avoid the repetition of risks.

(g) Evidence-based decisions

Decisions and deliberations must be based on a careful analysis of the available scientific evidence about potential environmental risks to human health. However, the absence of conclusive evidence is not an excuse for inaction.

(h) Efficiency

Improving the delivery of environmental health services, encouraging innovation and careful examination of how environmental health services are provided (including relative costs and benefits between alternatives) are important considerations if environmental health outcomes are to be optimised.

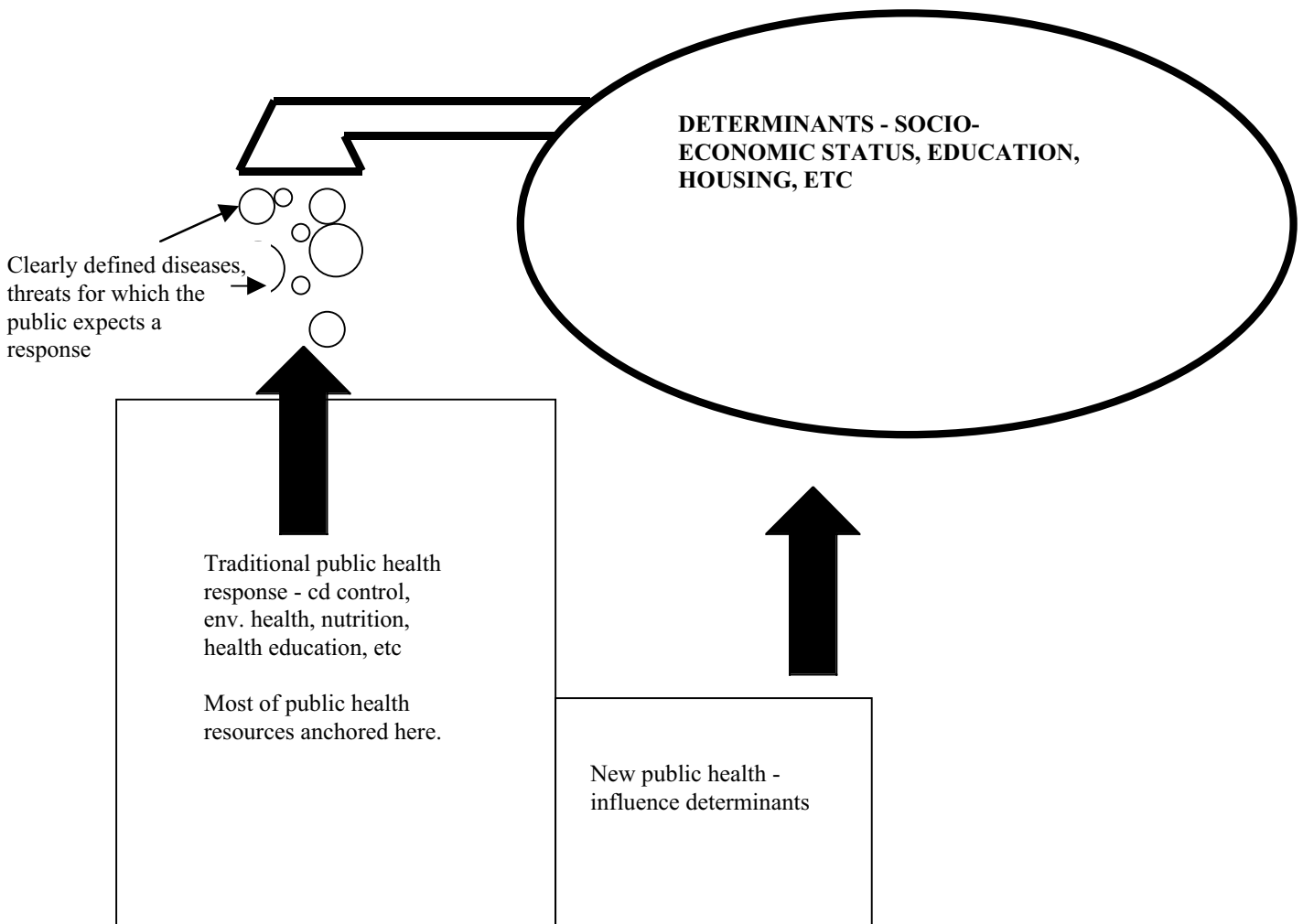
(i) Equity

Access for all Saskatchewan residents to appropriate environmental health services will reduce the gaps in health status among population groups.

RECOMMENDATIONS:

Before proceeding with recommendations respecting public health inspector programming, it is helpful to capture two key concepts using the illustrations below.

Figure 1

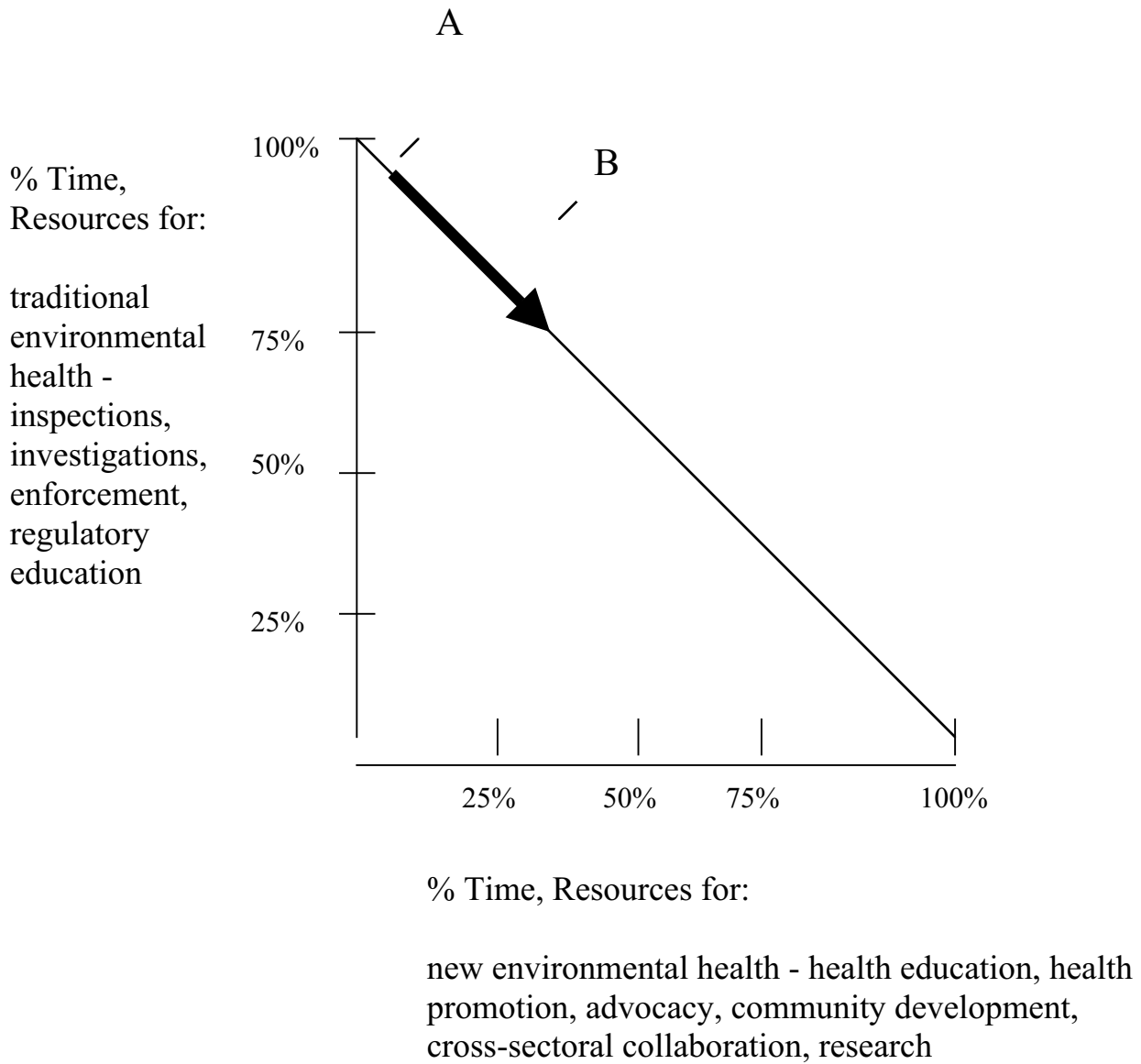


THE POPULATION HEALTH PROMOTION APPROACH AIMS TO INFLUENCE THE DETERMINANTS SUCH THAT HEALTH THREATS, PREVENTABLE DISEASES AND CONDITIONS ARE LESS THAN WHAT THEY WOULD BE OTHERWISE. THAT IS, LESS FLOW FROM THE TAP!

In figure 1, the larger box on the left represents current resources and programs that are used to respond to public health issues and challenges related to communicable diseases, health hazards, food and water safety, injury prevention, and specific chronic diseases or conditions. Clearly, a larger proportion of public health resources are in place to deal with these threats, many of which include the public expectation that government take the lead in responding to these threats. The smaller box on the right is intended to portray that fewer resources are available to influence health determinants even though such influence may produce better health outcomes. While influencing the determinants potentially carries with it a bigger health pay off, public health agencies should not underestimate the challenges of securing the necessary commitment to programs or activities in this area. The complexity of many social and economic problems are due in part to multi-factoral causes and the solution appears to rest with a wide array of agencies working together providing a multi-sectoral response. Identifying lead roles and accountabilities of the agencies involved is no easy task, particularly if the activity is only incidental or secondary to each agency's core business. Furthermore, the determinants themselves are decided to a great extent by the wider prevailing economic and political systems reflecting the various, (and in many cases difficult to reconcile), beliefs, values and conceptions of wealth creation, wealth distribution, freedoms, rights, and responsibilities of the members constituting the public. Regardless of the challenges, however, public health inspectors as part of the public health team need to be aware of the wider determinants and of the possibility of a larger health pay off associated with leading, partnering, or supporting initiatives having environmental health significance.

A related concept particularly applicable to environmental health programs is the time/resource budget line illustrated in [Figure 2](#). Point A is a rough estimation as to where many health districts are in terms of their public health regulatory program. At this point 90-95% of an inspector's time is taken up with an essentially traditional environmental health program (inspections, investigations, enforcement) and only 5% of their time on the "new environmental health" involving such activities as health education, health promotion, advocacy and community development. Again, there is a possibility of a greater health pay off by having inspectors spend more time and resources in these new areas of activity. Given that many public health inspector activities are regulatory in nature carrying with it legal duties and responsibilities, there is a limit to how much they can move to the right on the 'Y' axis without opening themselves and their employers to regulatory liability or not being able to defend themselves in a formal public accountability audit. Both public health inspectors and the district boards who employ them, should recognize that there is potential for pay off in this new area and therefore should be open to opportunities for leading, partnering or supporting related initiatives. Point B possibly represents a reasonable balance of 80% regulatory and 20% health promotion/advocacy.

Figure 2



Given the need to respond to the issues identified under “Challenges” on page 5, and to move into areas identified as "new public health" or "new environmental health" as illustrated in the two figures above, what can be done at the district level assuming that continued budgetary pressures will not allow for an increase in resources? The committee felt an in-depth review of current program activities is imperative in order to free up the necessary time and resources.

Recommendation # 1

That health districts initiate in-depth program reviews of environmental health programs with the purpose of freeing up more time and resources for advocacy, community development, population health promotion, and renewed emphasis on existing high risk program areas and new high risk program initiatives.

The committee requests that when the above mentioned program reviews are conducted the following factors be considered during the review:

- include proven risk assessment methodologies;
- identify what complaints to investigate, the degree of health risk and whether the general public is affected. This may result in a clearer delineation of "public health" versus “private health” issues.
- include an opportunity for the public to provide input
- use past work as references. Examples include the work priority guidelines and previous Saskatchewan public health inspection review reports.
- use "needs assessments" to help determine new areas of emphasis (for example injury prevention, bicycle safety, control of smoking)
- consider emerging communicable disease threats in the analysis (examples include West Nile Virus, Hantavirus and antibiotic resistant strains of microorganisms.)

Recommendation # 2

That Saskatchewan Health participate in district program reviews if the scope of the review includes recommendations on amending or not enforcing a provincial regulation under The Public Health Act, 1994.

Because health district public health inspectors, along with medical health officers, are responsible for enforcing The Public Health Act 1994 and related regulations, there exists within the environmental health program the notion of core services. These are viewed as core since provincial laws are required to be enforced by local authorities (i.e. Regional Health Authorities) throughout the province. Saskatchewan Health should be part of any discussions that intend to change this core/non-core service mix, since it plays the lead role in developing and amending the legislation and regulations. It is essential that the local authorities understand their legal role in regulatory enforcement and associated liabilities for not carrying out the regulatory requirements.

Recommendation # 3

That following public health inspector program reviews by the health districts, Saskatchewan Health lead a review of all regulations under The Public Health Act, 1994

When conducting the review, the committee suggests the following factors be considered:

- the regulatory regime be flexible enough to be responsive to varying situations and circumstances. (See Appendix 1 for a list of factors to be considered when enforcing regulations)
- the districts have sufficient resources to carry out the agreed upon regulations and any legal costs associated with these
- regulatory liability concerns be included in the review
- identification of areas currently covered by regulations that could be better addressed through provincial policy. For example, there is a possibility of amending the Public Accommodation Regulations to remove the licensing provision. The standards could be provided as a technical guideline to new operators and a checklist developed as a self-monitoring tool.
- consideration should be given to amend the definition of public eating establishment in the Public Health Act, 1994 to include institutional kitchens such as personal care homes, special care homes, communal kitchens for the aged – all of which involve high risk groups.
- Board members involvement in the review process.

Recommendation # 4

Health Districts and Saskatchewan Health are encouraged to continue their efforts in striking agreements with other agencies in order to strengthen service delivery, minimize duplication of service and fill potential gaps in service.

Saskatchewan Health and health districts are near completion of agreements with the Canadian Food Inspection Agency, Sask Ag and Food on food recalls, food –borne illness outbreak investigations and the delineation of responsibilities. Similar collaborative efforts may be needed or revitalized in the following areas:

- with municipalities and Municipal Affairs and Housing regarding placarding of houses, inspection of plumbing systems,
- with Sask Water Corporation and Saskatchewan Environment and Resources Management and PFRA regarding public water supplies and rural water pipelines,
- with the Rentalsman Office regarding tenant’s complaints, some of which are not health related,
- with Sask Labour (Occupation Health) regarding indoor air quality in schools, rinks and other places,
- with Sask Ag and Food regarding complaints stemming from intensive livestock operations,

- with Social Services and Saskatchewan Health in the area of day care facilities, personal care homes, approved homes, group homes, etc.
- with SMA/local physicians or the College of Physicians and Surgeons regarding effective reporting of disease trends and suspected outbreaks,
- with Building/Fire Inspection agencies in the area of substandard public buildings and common concerns
- with the Saskatchewan Liquor and Gaming Authority regarding facilities licensed and inspected by both agencies.

Recommendation # 5

That Saskatchewan Health and health districts explore the feasibility of providing inspections for another agency's legislation on a fee for services basis.

In the document "Strategic Directions for Regional Environmental Health Programs in Alberta - A Guide to the Future", the authors reviewed opportunities for revenue generation to recover some environmental health program costs. In general, it was felt that the resourcing of local environmental health services is best achieved through a publicly funded mechanism. Only if additional funding was necessary, then Alberta recommended fees in certain areas. (See Appendix 2). The committee agrees in principle that because of the "public health" nature of regulatory programs under the Public Health Act that there not be fees associated with inspections. However, since some of the inspections are beyond Health's control in that other agencies' legislation or regulations reference the need for public health inspections, then it was felt appropriate to consider charging these agencies for the services. Consultation with the affected agencies is required before any decisions should be made.

Recommendation # 6

That Saskatchewan Health and health districts seek out opportunities to assist First Nations in developing public health by-laws dealing with public health issues (e.g. air pollution, contaminated ground water, communicable diseases).

It is uncertain to what degree First Nations are using The Public Health Act, 1994 and related regulations as their public health/environmental health standards on First Nations lands. Clearly, First Nations that pass by-laws under the Indian Act can establish their own standards in these areas. Districts and Saskatchewan Health should make themselves available to First Nations if there is a need to develop public health by-laws, particularly in cases where public health issues may transcend jurisdictional/geographic boundaries.

Recommendation # 7

That Saskatchewan Health and the health districts collaborate with other agencies to strengthen surveillance in the following areas: ground water contaminants including pesticides; E. coli 0157 in the general environment and in meat, particularly ground meat at the retail level; and antibiotic resistant organisms in food.

Emerging issues related to microbial resistance, E. coli contaminated food, and an increasing exposure to pesticides requires that public health agencies be in a better position to identify the extent of the problem, and characterize the risk before recommending any public health interventions. Since several agencies, provincial and federal are involved in these areas, it will be necessary to collaborate and pool resources for surveillance purposes.

Recommendation # 8

That health districts and Sask Health increase its capacity to conduct toxicological risk assessments or have access to this expertise elsewhere.

Public health is expected by the public to provide health risk assessments, including cases involving human exposure to a toxicant. Such assessments tend to be complex requiring specific expertise. This expertise should either be resident within districts or Sask Health or be available from other agencies or departments possibly through formalized agreements. Because public health inspectors rely on the medical, clinical expertise of medical health officers in dealing with environmental health issues related to environmental toxicants (pesticides, drinking water contaminants, air quality, molds,) medical health officers should individually assess their strengths in this area and where necessary seek opportunities for further improvement.

With more public awareness related to pollution and contamination of food, water and air, there will be increasing pressure on public health officials to speak to these issues. While Health Canada does regulate or provide risk assessment information on products such as pesticides and genetically modified foods, it does not provide assistance in assessing risk in cases where the person has been exposed. Sask Health should better position itself to deal with what is expected to be an increasing number of these incidents, particularly in a province where there is wide spread use of agricultural chemicals and other potentially harmful products.

Recommendation # 9

That environmental health indicators be developed jointly by Sask Health and the health districts.

Generally, indicators have been given a lot of attention lately because of a renewed emphasis on setting objectives and measuring a performance within an accountability framework. Building on work already done on public health indicators, consideration should be given to developing ones that are unique to the practice of environmental health. Some of the indicators by their very nature will involve involvement from other agencies before they are finalized and adopted.

Recommendation #10

That public health inspectors complement their existing regulatory and investigative skills by learning and utilizing population health promotion approaches and seeking opportunities for applying them at the operational level.

As mentioned previously the population health promotion model has the potential to achieve a bigger pay off than some of the more traditional approaches. While on the surface the model does not appear to lend itself to regulatory programs very easily, there was a time when public health inspectors did incorporate some of its elements in winning support for public health regulations. Following is an excerpt from the 1947 book "Milk and Food Sanitation Practice":

"Educational activities in milk control offer the sanitarian unlimited possibilities. Many a successful milk program has had as its foundation a sound educational approach. In contrast, abrupt enactment of rigid requirements without sufficient understanding on the part of milk producers and dealers and the public has led to ill will and confusion.

Earlier in this chapter it was pointed out that the basic objective of a milk program is the increased use of properly pasteurized milk. To foster this objective the following educational procedures and policies are suggested:

- 1. Publicly and vigorously advocate the pasteurization of the community's milk supply. Be certain that all members of the health department staff fully understand the importance of pasteurization and that they, too, advocate the use of pasteurized milk. Recommend, in writing, the use of pasteurized milk to schools, hospitals, and similar public institutions using raw milk. Fully explain to all raw milk dealers your position and your reasons for advocating milk pasteurization.*

Advise and encourage raw milk dealers to install pasteurizing equipment, or urge that their milk be processed at some local pasteurization plant. Take raw milk dealers on visits to local pasteurizing plants.

- 2. Use every reasonable device to stimulate community interest in pasteurized milk. Discuss, explain, and advocate pasteurization through the press, before clubs and civic organizations, at schools, and through similar channels within the community.*
- 3. Advocate the passage of an ordinance requiring the pasteurization of all milk, explaining the need for such an ordinance and how the public will benefit through reasonable legal safeguards.*

The utilization of such a plan for improving the milk supply is admittedly one that requires courage, hard work, and a willingness to accept the challenge of difficulty and discouragement. The milk sanitarian who adopts a "laissez faire" attitude will do little toward bringing about pasteurization. A firm stand is necessary on this issue, and every reasonable effort must be directed toward it."

Recommendation # 11

That health districts increase their capacity in the area of health promotion by either hiring full-time health promotion personnel or increase the training of existing program personnel.

It is recognized that not all health districts have full-time health promotion contacts that can provide training to other program staff in addition to carrying out their own health promotion activities. If a shift to the 'new public health' and 'new environmental health' is to be made successfully, then it is necessary to either hire more health promotion contacts specifically tasked to do health promotion work or increase the skills of existing program staff by providing additional training.

Recommendation #12

That, in addition to program reviews and regulatory reviews, public health inspectors guided by the Saskatchewan Branch of the Canadian Institute of Public Health Inspectors assess current standards of practice that meet the objectives of maintaining public safety and increasing efficiency.

The committee identified the following as possible approaches or means to accomplish the above objectives.

- More effective use of self-evaluation tools to complement less frequent routine inspections. Investment in training for the inspectors and the client group must be made for this to be successful.
- Health districts should employ a risk based inspection system whereby high-risk facilities are inspected more frequently than low risk facilities.
- It is suggested that first time operators of licensed facilities should be issued a probationary licence for the first year of operation. A regular licence is then issued if the track record proves satisfactory.
- Districts may wish to develop a collaborative approach to compliance, which includes scheduling inspections with operators and providing more in-house training. This would complement periodic, unannounced inspections.
- As a general principle, public health inspectors should move from a regular inspection role to an auditing role.
- Districts should utilize a “train the trainer” approach for food handling and swimming pool operators courses. The trainers can be tested to determine their knowledge of the regulations (for example, section 10 of The Public Eating Establishment Regulations) and, if successful, should be able to teach the entire course without public health inspector involvement. Health districts (or Saskatchewan Health) can establish a provincial cap on fees charged by these trainers.
- Home study courses, such as the one developed by North Central Health District, should be considered by health districts to accommodate food handlers that cannot attend regularly scheduled courses. Teaching resources in alternate languages should be available throughout the province.
- More effective use of existence compliance tools can be utilized, not only to reduce onsite inspection time for the agency but also assist the operator in managing the facility to the best public health standard. One example given was in the case of a marginally operated licensed swimming pool where consideration could be given to attaching conditions to the licence requiring the operator to contract with a private company providing expertise in the area.
- Historically, compliance has been gained through inspection, education, conditional licensing and formal hearings. It is recommended that “alternative compliance tools” be

further explored, including mediation, ticketing, arbitration in issuing public warnings/alerts.

Recommendation #13

That Saskatchewan Health and health districts strengthen the availability and distribution of standardized science-based fact sheets, brochures and other print resources as a means of increasing public education on environmental health matters.

The committee identified the following examples when discussing the above recommendation:

- Rural sewage and water information should be made available at all rural municipal offices, small urban offices and Saskatchewan Ag - Rural Service Centres.
- The development of a fact sheet resource library that is shared with all districts.
- There is a need to update existing fact sheets related to, for example, safe private water supply and shoreland pollution control pamphlets. Availability/updating of sign and stickers is also necessary.
- Health education is an important tool that complements and indeed makes regulatory programs more effective. It is important that there is department and district commitment to develop and maintain good environmental health education resources for the public including technical equipment such as power point projectors.

Recommendation #14

That the public drinking water programs administered by the health districts and related policies and guidelines developed jointly by Sask Health and the districts be immediately assessed and where gaps are identified take appropriate measures to fill them.

The water program in particular is singled out because of the concerns and publicity raised as a result of the tragedy in Walkerton and the outbreak in North Battleford. Since the time of these events, provinces including Saskatchewan, have reviewed or are in the process of reviewing their regulatory activities related to drinking water. The committee supports the strengthening of water protection and education measures. During the review process, it is important that the following factors be considered:

- That there be close collaboration among the affected departments and agencies (Sask Health, Saskatchewan Environment and Resources Management, Sask Water Corporation, Municipal Affairs and Housing, Sask Agriculture and Food, health districts, municipalities, and others) with the purpose of more clearly defining roles and responsibilities, of identifying gaps in protection and working toward resolution of problems identified.
- That regulations under The Public Health Act, 1994 include more specific requirements for public water supplies under Health's jurisdiction (i.e. Health Hazard Regulations).
- That special attention be given to source protection of water supplies. One opportunity for accomplishing this is through amendments to the Planning and Development Act administered by Municipal Affairs and Housing. The amendment could require all

municipalities in the province to have in place land use bylaws setting minimum isolation distances from intensive livestock operations and other potential sources of agricultural or industrial pollution.

- That a province wide database be developed to include water quality results from public and private systems.
- That continuous and improved education and training be provided to environmental health staff in the area of water and that access to consultation services be expanded

Recommendation #15

That health districts, as an employer, continue its commitment to ensure public health inspectors maintain an appropriate skill set.

Environmental health challenges are continually changing and to meet these challenges effectively, public health inspectors should keep abreast of new approaches and acquire new skill sets. While there is an onus on individual professionals to upgrade skills themselves, employers too must be committed to securing and maintaining high quality employees. The advantages accruing to the employer include fewer complaints about service, reduced opportunities for negligence and regulatory liability, feeling of shared commitment, and a more attractive work place that can compete with those in other jurisdictions. Further, once program regulatory reviews are complete, a complete assessment of training requirements is needed and a definitive plan to provide this training should be developed. The committee identified one area in particular as a training need - increased expertise in risk assessment/risk management.

Recommendation # 16

That Saskatchewan Health and the public health officers within the health district should better educate all district health boards about the environmental health programs being offered by the districts.

The committee felt that, due to acute care, special care, and ambulatory care issues within the districts taking up most of the health board's attention, there is minimal knowledge at the board level on their legal responsibilities under *The Public Health Act* and on environmental health programs generally. The committee felt that Saskatchewan Health should update *The Public Health Act Orientation Manual* and provide copies to new district health board members. Staff themselves are encouraged to seek support from district administrators on the need to provide presentations at board meetings on new developments within the environmental health programs. It was also felt that district boards have very little knowledge of the concept of regulatory liability and that greater effort should be made to advise them in this regard.

Recommendation #17

- 1. That Saskatchewan Indian Federated College (Environmental Health Program) consider recognition of the two year certificate programs that were once offered through British Columbia Institute of Technology and Ryerson Polytechnical Institute for purposes of applying credits towards the environmental health and science degree offered by SIFC.***
- 2. That Saskatchewan Indian Federated College add a distance learning component to the Environmental Health Program.***

Note: This recommendation was discussed at the SIFC Program Advisory Committee on June 11, 2001 and given support in principle.)

The establishment of the Saskatchewan Indian Federated College Environmental Health program creates opportunities for public health inspectors. Once the program becomes accredited (formal application to be made in fall of 2001), inspectors will be able to upgrade their skills if they have easy access to the program through distance learning. Also, having a training facility located in the province makes it easier for those inspectors wishing to pursue a degree in environmental health and science. SIFC should consider recognition of the two-year certificate programs that were offered by Ryerson and BCIT prior to the Canadian Institute of Public Health Inspectors making a decision in the late 1980's requiring a degree for public health inspector certification. SIFC's close connection with public health inspectors, through the advisory committee or arrangements of student practicums, will assist the College in drawing upon inspector expertise for curriculum development and teaching. Further, it was suggested that health districts support its employees who wish to take courses offered by SIFC.

Recommendation #18

That the Saskatchewan Branch of the Canadian Institute of Public Health Inspectors continue to offer their annual in-service training course and that health districts urge public health inspectors to attend these when offered.

For several decades the annual in-service for public health inspectors has been an effective way of sharing information, discussing common issues and learning about emerging health threats. It is important that the Saskatchewan Branch of the Canadian Institute of Public Health Inspectors continue to take the lead role in sponsoring and organizing these annual training events. Indeed, the Institute members' code of ethics (see appendix 3) underscores the importance and commitment to maintaining and improving skills. In cases where inspectors have been reluctant to attend training courses for several years, the Saskatchewan Branch should encourage these inspectors to attend by advising them and their employers of the benefits and importance of maintaining and developing skills. Further, the Saskatchewan Branch should consider asking district employers about making continuous membership in the professional association a condition of employment.

Recommendation #19

- 1. That public health inspectors through their professional association, Sask Branch of the Canadian Institute of Public Health Inspectors(CIPHI) and in collaboration with other agencies such as Saskatchewan Public Health Association, increase their advocacy role in recommending program changes and in responding to emerging diseases and broader environmental issues having significant public health impact.***
- 2. That CIPHI – Saskatchewan Branch take immediate measures to address the recruitment and retention crisis with the Saskatchewan Association of Health Organizations, health districts and Saskatchewan Health.***

The committee identified the following areas warranting advocacy by the inspectors' professional association:

- Health districts encouraged to better capture public health program funding that is separate from other community service programs.
- Government develop a website that lists all the regulatory departments and the activities they regulate. This will assist businesses and the public.
- Adoption of an environmental health charter similar to the one in Australia.
- Declaration of an annual Environmental Health Day with related promotional activities.
- Increased awareness about environmental risks affecting children.
- Issuance of position papers by the Canadian Institute of Public Health Inspectors on a broad range of environmental health issues such as climate change, ozone depletion, biodiversity, biotechnology, ecosystem health and intensive agriculture either alone or in partnership with other not-for-profit health orientated organizations.
- Promotion of the "Precautionary Principle" as espoused in the Rio Declaration on Environment and Development (Brazil 1992).
- Regarding biotechnology, advocacy on the need for caution, examination of alternatives, and case by case evaluation within the framework that seeks to move agriculture toward sustainability.
- Education about the need to reduce impact of greenhouse gases and ozone depletion and the urging of health districts to have an up-to-date emergency plans in place to deal with disasters associated with global climate change.

CONCLUSION

There have been many new challenges and developments within the environmental health field in Saskatchewan since the initial phase of this strategy. The complexity and diversity of environmental health issues is never stagnant and therefore the future directions must be fluid enough to address these changes.

Certainly the recruitment and retention of qualified environmental health practitioners is essential to any program review. In light of the Walkerton water tragedy and the North Battleford outbreak there has certainly been a much needed awakening of the general public to the call for maintaining basic public health programs that provide clean water, safe food and healthy communities. In addition the public's demand for services in areas that are not traditional programs such as indoor air quality and bioterrorism create a need for changing skill sets through staff development and a risk based program analysis.

The committee has made recommendations in the areas of standards of practice, advocacy and the need for public education. Regulatory and program reviews are essential to maintaining a viable and effective public health inspection program in this province. Existing staff cannot continue to provide the range of programs offered without the tools and support of Saskatchewan Health and the health districts. The addition of programs such as *The Tobacco Control Act* is a strong example of increasing expectations with no additional staff or resources to complete the task properly.

Certainly some interagency approaches have been considered and there is positive movement in that regard. However, the expectations of other agencies for providing services under their legislation are ongoing and so the frustration of public health inspectors within this province continues to mount. This is evident from the rising number of inspectors who have chosen to leave the province in recent years.

It is indeed apparent that this is a critical time to immediately pursue the finalization of an Environmental Health Strategy for Saskatchewan. Through our professional association partners, the Canadian Institute of Public Health Inspectors – Saskatchewan Branch and the Saskatchewan Public Health Association, it is hoped that they diligently strive to advocate for the changing role public health inspectors need to play in this diverse time.

APPENDIX 1

RISK ASSESSMENT AND MANAGEMENT CHECKLIST (not intended to be definitive or exhaustive)

- Recognition that public health risk (i.e., risk associated with a health hazard) is a continuum ranging from negligible or low risk to very high risk.
- Recognition that professional judgement and experience are needed to determine where on the continuum the risk lies and to determine the appropriate intervention (education, persuasion, legal sanction) needed to remove or diminish that risk.
- Recognition that professional judgement is more informed when it considers the following questions:
 - How were situations of similar risk handled in the past?
 - What is the likelihood (low, medium, high) of a potential hazard causing harm?
 - What is potential impact of the hazard (eg. minor or serious illness, or injury, possibility of death)?
- Recognition that the regular (i.e., district health board) is liable if no action is taken and non action causes disease, injury or death.
- Recognition of the financial costs to the person required to abate the health hazard.
- Recognition that because of prevailing community standards, cultural practices or rural traditions the public may accept exposure to a potential health hazard.
- Recognition that other departments or agencies may have the lead responsibility for abating specific hazards.
- Recognition of public health standards and practices used elsewhere in similar situations.
- Recognition that public safety and the public interest are the most important factors to consider when assessing and managing public health risks.

APPENDIX 2

(ALBERTA – STRATEGIC DIRECTIONS FOR REGIONAL ENVIRONMENTAL HEALTH PROGRAMS – 1994)

Significant drawbacks to the reliance of fees as a method of revenue generation for this program exist, especially considering the program's fundamental mandate of *protecting public health*. These problems include:

- The beneficiaries of environmental health services are the public at large, therefore, philosophically it may be argued that the cost of this public health protection should be born by the public at large. It is in the best interests of everyone that all parties practice sound public health principles and practices and barriers should not be in place for specific individuals and industries in achieving public health objectives. For example, charging cost-recovery fees for Food Safety courses may act as disincentives for a program objective of achieving a high proportion of attendance by food facility operators. The relatively small *publicly funded* investment in this education initiative may result in a much greater compliance with public health principles (and system cost-savings) than if the cost is borne solely (and disproportionately) by restaurant operators.
- By allowing Environmental Health programs to charge fees-for-services, there is an inherent financial incentive for programs to bias their activities towards those that generate (the greatest) revenue, regardless of health risk considerations. For example, there is an incentive to retain revenue-generating services which have outlived their usefulness.
- The administrative costs associated with revenue-generation may exceed the financial benefits of charging fees.
- Emphasis on revenue generation may divert attention away from important professional services and may change the working relationships between environmental health staff and their service recipients.

On the other hand, several arguments may be presented for the consideration of revenue-generation through the levying of certain types of fees in this program:

- It is possible that individuals and organizations may attach greater value to environmental health services when a cost is associated with those services.
- In the event of severe financial constraints, carefully considered application of fees may offer an alternative source of funding for this program.
- In cases where requests for service (e.g. full chemical analysis and bacteriological analysis of water) are unwarranted and unrelated to health concerns (e.g. general curiosity or a desire to test the effectiveness of water treatment devices), then attaching a fee for this service may act as a disincentive for unnecessary testing.

At present, the majority of local health authorities charge fees associated with the Food Safety courses required of managers through regulation. Several charge fees for swimming pool courses and for the administrative costs associated with chemical and bacterial water testing.

General support was voiced by members of the Working Committee for permit fees as this was considered to be a necessary cost of doing business and was in keeping with similar fees issued by other regulatory agencies. As well, the Committee voiced support for the “polluter pay” principle, suggesting that Environmental Health program costs associated with clean-up endeavours should be recovered from the polluter. Mixed support for charging fees for administrative costs associated with testing was expressed. In general, the concept of levying fines for non-compliance is not supported.

Considering the basic philosophy of public health and the relatively small per capita funding involved, the resourcing of local environmental health services is considered to best be achieved through a public funding mechanism. If additional funding is absolutely required in order to achieve an adequate level of public health protection, then it is recommended that regional health authorities be allowed to generate revenue for this program only for the following:

- *fees for the issuing of facility permits;*
- *recovery of the cost of program involvement in “clean-up” endeavours where one or more particular polluters are clearly identified;*
- *direct administrative and material costs associated with some environmental health services (e.g. Food Safety course materials, handling and processing of water samples); these fees should not provide the funding for the professional environmental health services (inspection, education, etc.).*

APPENDIX 3

CODE OF ETHICS

I acknowledge:

That I have an obligation to the sciences and arts for the advancement of public health. I will uphold the standards of my profession, continually search for truths, and disseminate my findings; and I will strive to keep myself fully informed of the developments in the field of Public Health.

That I have an obligation to the public whose trust I hold and I will endeavour, to the best of my ability, to guard their interests honestly and wisely. I will be loyal to the government division or industry by which I am retained.

That the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.

That being loyal to my profession, I will uphold the Constitution and By-laws of the Canadian Institute of Public Health Inspectors and will, at all times, conduct myself in a manner worthy of my profession.

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Setting Priorities Among Public Health Protection Programs, 1996 Results

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