

# PUBLIC HEALTH LABORATORY

Public Health and Wellness Branch  
Department of Health and Community Services

## ANNUAL PERFORMANCE REPORT 2009-2010



## MESSAGE FROM THE DIRECTOR

On behalf of the Public Health Laboratory (PHL), Public Health and Wellness Branch, I am pleased to submit the 2009-2010 Annual Report to the Minister of the Department of Health and Community Services (DHCS). In keeping with the *Transparency and Accountability Act*, the PHL has been assigned a Category 2 status and is expected to develop business plans and reports. This report focuses on the progress made on the key issues identified in the 2008-2011 Performance-based Business Plan, as part of our commitment, to ensure best practices and the highest level of integrity of our services. The strategic directions of the DHCS have been considered in the development of this report.

As Director, I acknowledge that on behalf of the PHL and the DHCS, I am accountable for the preparation of this report and the actual results or any variances reported in this document.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sam Ratnam', with a large, stylized initial 'S'.

Sam Ratnam, Ph. D., MPH, FCCM  
Director

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## 1.0 INTRODUCTION

This document has been prepared under government's accountability measures as defined in *The Transparency and Accountability Act* (the *Act*) and is based on the 2008-2011 Business Plan. The 2009-2010 Annual Report demonstrates the commitment of the Public Health Laboratory (PHL) to ensure the effective realization of its mandate and that all associated efforts reflect the values and principles of the organization while pursuing standards of excellence for all of its operations. This report demonstrates that the PHL's allocation of resources is consistent with government's broader mandate for the efficient and effective use of public resources.

## 2.0 THE PUBLIC HEALTH LABORATORY OVERVIEW

### 2.1: *Core Services*

The PHL is not a legislated entity. It operates under the authority of the Department of Health and Community Services (DHCS) with the Director of the PHL reporting to the Chief Medical Officer of Health at the DHCS.

The core services of the PHL are focused on the screening, detection, prevention, surveillance and assessment of infectious diseases throughout Newfoundland and Labrador. As such, the PHL is an essential and integral part of the province's public health system infrastructure, with our services being a vital component of safeguarding provincial public health. There are no facilities in the province that duplicate the roles and responsibilities of the PHL; hence there is no redundancy in PHL operations operations.

## Annual Statistics: 2006-07 to 2009-10

Section	Tests Performed			
	2006-07	2007-08	2008-09	2009-10
<b>SEROLOGY</b>	81,671	90,041	101,898	106,399
<b>VIROLOGY</b>	12,969	13,504	8,915	13,443
<b>BACTERIOLOGY MYCOLOGY PARASITOLOGY</b>	18,711	19,796	24,498	28,355
<b>MYCOBACTERIOLOGY</b>	2,140	1,921	1,925	2,437
<b>SANITARY</b>	15,217	14,141	15,430	14,489
<b>TOTAL</b>	130,708	139,403	152,666	180,394

The above statistics demonstrate an increasing demand for the services provided by the PHL since 2006-2007. This may be attributed to a number of factors, including the introduction of new services and an increase in the range of existing services to adequately meet our provincial demand. More specifically, there was a significant increase in virology due to the H1N1 pandemic. Also there was an increase in bacteriology due to an increased demand for Chlamydia (~ 10%) and gonorrhoea (~50%) testing. This is largely due to the testing system we introduced which allows for simultaneously testing for both Chlamydia and gonorrhoea using a single specimen.

The main laboratory is located at Dr. Leonard A. Miller Centre, 100 Forest Road in St. John's with external water testing service sites in all health regions of the province. These external water testing sites operate under the direction of the PHL.

**Contact Information:** Newfoundland Public Health Laboratory  
 Dr. Leonard A. Miller Centre, Suite 1  
 100 Forest Road, St. John's, NL A1A 3Z9  
 Telephone # 709-777-6583, Fax # 709-777-6362

## 2.2 *Staff and Budget*

The PHL has a staff complement of 26 employees, with 2 positions currently vacant. The positions include:

- 5 Management (DHCS)
- 5 Hospital Support (NAPE HS)
- 15 Laboratory and X-Ray (NAPE LX)
- 1 Non-Bargaining/Non-Management

The 2009-10 budget for the PHL was approximately \$4.5 million. A copy of the 2009-2010 audited financial statement can be found in Appendix C. The PHL does not charge for any of its services and therein generates no revenues from the clients we serve.

## 3.0 MANDATE

The PHL operates under the authority of the DHCS with the Director of the PHL reporting to the Chief Medical Officer of Health at the DHCS. PHL's mandate is to:

- Act as the provincial laboratory centre for infectious disease detection, surveillance, prevention, control and epidemiology;
- Provide a comprehensive range of specialized and reference laboratory services in clinical and public health microbiology and infectious disease epidemiology to all the provincial health authorities and related stakeholder groups;
- Pursue research and development activities in support of its responsibilities for securing optimum public health.

## 4.0 LINES OF BUSINESS

The PHL is not a legislated entity. PHL supports the DHCS's mandate to strengthen the public health capacity and has several lines of business including:

- Laboratory, consultative, educational and training services in the detection, prevention, surveillance and control of infectious diseases;
- Provision of routine and specialized laboratory diagnostic and screening services in public and clinical health microbiology to all hospitals, clinics and other health related agencies across the province;
- Laboratory and consultative services in outbreak investigation and control;
- Laboratory based surveillance of communicable disease incidence and prevalence;
- Research and development activities in the areas of infectious disease epidemiology, immunization, community health, clinical and public health microbiology;
- Municipal water supply safety;
- Pandemic influenza, bioterrorism and emergency response preparedness;
- Lab supply center ; and
- Guidance in the development of related policies.

The above lines of business are consistent with the PHL's mandate and are comprehensive. One of the focuses of the DHCS's strategic directions is the "Surveillance of Communicable Disease" which provides the foundation for PHL's lines of business. The core function of the PHL is to safeguard public health throughout the province through the surveillance, detection, prevention and control of infectious diseases. In this capacity, PHL works closely with hospitals, medical clinics, health care agencies and health care professionals throughout the province, as well as public officials within DHCS, the provincial health regions and other public health authorities to provide routine and specialized diagnostic and screening services in clinical and public health microbiology.

The PHL test services cover the following seven clinical and public health service areas:

- Serology
- Virology
- Bacteriology
- Parasitology

- Mycology
- Mycobacteriology
- Sanitary/Environmental Microbiology

The PHL also provides bacteriological water quality testing service for protection of public health to government departments, private individuals, communities, municipalities, private and other public agencies etc, throughout the province. Partners in external water testing services include 6 hospital laboratories across the province. A full listing of all patient and public health-related diagnostic and screening services provided by the PHL is provided in Appendix A.

## 5.0 VISION

The 2008-2011 vision of PHL builds on the vision of the DHCS that “individuals, families and communities will have achieved optimal health and well being”. Evolving from this the vision of the PHL is that:

*Newfoundland and Labrador will have state-of-the-art technology in laboratory services that reflect best practice in clinical and public health microbiology, public health safety and protection and contribute to optimal health and well being.*

This vision reflects the core mandate of the PHL as well as desired outcomes. It also provides the basis for the organization’s core identity, roles and responsibilities. As the science relating to infectious diseases advances, so too should the capabilities and quality of services provided by the PHL. This vision is fundamental to the well-being and health of the provincial population

Note: To access a complete version of the PHL 2008-2011 Business Plan or the DHCS 2008-2011 Strategic Plan , please contact the Department of Health and Community Services Tel: 709-729-4984 or email: [healthinfo@gov.nl.ca](mailto:healthinfo@gov.nl.ca) or visit, <http://www.health.gov.nl.ca/health/>.



## 6.0 VALUES

The PHL has adopted its own set of core values to guide its work and the manner in which it pursues its mandate. PHL has also adopted and modified the broader values established by the DHCS. Both sets of values are provided below:

### **Department of Health and Community Services Values:**

- Collaboration* Ensure that the PHL works with other stakeholders in fulfilling its overall mandate for the protection of public health.
- Fairness* Ensure that each person uses a balance of evidence for equity in decision making.
- Privacy* Ensure confidentiality and protection of information related to any persons, families, organizations, communities.
- Respect* Enable each person the opportunity to express their opinions in an open and safe environment
- Transparency* Ensure all persons are forthcoming with information related to decision making except where prohibited by legislation.
- Excellence* Each person performs to the best of their abilities and within available resources.

### **Public Health Laboratory Values:**

The following reflects the core values that guide the work of the PHL and the manner in which the mandate is pursued:

- Integrity* Ensure that the PHL is consistent in securing the absolute accuracy and reliability of its services, procedures, test results and policy advice.
- Timeliness* Ensure all clients have access to information and test results on a consistent basis and with the fastest turn-around time possible.
- Reliability* Ensure all its clients can count on the PHL for addressing their laboratory and information requirements so as to enable them to fulfill their mandates with accuracy and confidence.

*Excellence*      Ensure state-of-the-art technology and expertise in the delivery of all of its services, consistent with best practices and standards established in the industry.

## 7.0 PRIMARY CLIENTS

As the provincial laboratory, mandated to be responsible for providing all routine and specialized reference diagnostic and specialized services in clinical and public health microbiology in the province, the PHL has many clients. These include:

- All provincial hospitals
- Health officials of DHCS
- All community health clinics
- All medical clinics/offices
- Doctors and their patients
- Nursing homes and stations
- Public Health Inspectors
- Department of Municipal Affairs
- Municipalities
- Department of Environment and Conservation
- Department of Government Services
- National and international networks, expert working groups, advisory committees etc, involved with clinical and public health microbiology and epidemiology.

Many of these clients are dependent on the services provided by the PHL. Without these services they could be compromised in fulfilling their mandate for preserving public health and addressing the health related needs of their clients. Based on current quality and communication protocols, PHL is successfully addressing client needs.

## 8.0 SHARED COMMITMENTS/PARTNERSHIPS

As part of its mandate the PHL functions closely and in partnership with all microbiology laboratories in the province as well as many health related agencies provincially and nationally. The following items illustrate the shared commitments of the PHL in dealing with various areas identified in its goals, role and functions and the contributions of each towards identified strategic directions.

- **Provincial Electronic Data Transfer Initiative:** Over the past several years, PHL has been working in close collaboration with the Information Technology Department of Eastern Health towards establishing a complete electronic data transfer of laboratory information to microbiology laboratories of the major hospitals in the province. This was initially implemented in 2003 with hospitals in the Eastern Health Region and subsequently expanded to the Central and Western Health Regions in partnership with the various microbiology laboratories. Implementation of the electronic data transfer through Medinet has been initiated with the Labrador-Grenfell Health Region. Testing of the Grenfell Medinet is currently in progress and the Labrador region will follow after successful completion of the Grenfell region. This project has greatly improved the timely transfer of, and access to health data across the province. This system is designed to enhance the ability of the provincial infectious disease surveillance system to monitor overall public health in a timely manner and to respond quickly to critical and urgent health issues.
- **National Partnerships:** The PHL participates in several national and international networks, expert working groups and advisory committees that are involved with clinical and public health microbiology, and the prevention, control and surveillance of infectious diseases. In this capacity, the PHL is a partner in public health at the national level and represents the province in facilitating the two-way transfer of information vital to the monitoring and securing the various aspects of the health status of the country. The following highlights PHL's existing partnerships at the national level:

*Canadian Public Health Laboratory Network* (CPHLN), whose primary focus is to provide a forum for exchange of information and the identification and establishment of common goals and priorities at inter-provincial and national levels. PHLN plays a major role in respecting national public health, and is one of 6 Expert Groups recently established under the Pan Canadian Public Health Network. Membership includes all PHL Directors across the country and representation from various related agencies.

There are also several committees and working groups under the CPHLN umbrella. The PHL is an active member of the following groups:

- *Canadian Tuberculosis Laboratories Technical Network* whose mission is to promote excellence, standardization and quality assurance in mycobacteriology services.
  - *National Enteric Surveillance Program*, a federal-provincial network of laboratories that tracks the prevalence and incidence of microorganisms causing enteric illnesses.
  - *National Water and Food Safety Subcommittee* whose major objective is to ensure best practices in microbiology testing of drinking water for public health purposes.
  - *Bio-terrorism Subcommittee*, whose primary objective is preparedness and technical expertise and training for potential events of terrorism involving microorganisms,
  - *Laboratory Standardization Subcommittee*, whose main objective is to review, update and standardize laboratory testing parameters for nationally notifiable diseases and address related quality control and quality assurance issues.
  - *Pandemic Influenza Laboratory Preparedness Network*, whose main objective is development of national laboratory guidelines, technical expertise, coordination, and response plan for an effective and timely response to pandemic influenza.
- *Canada Health Info way* - Pan-Canadian Lab Standards Group - This national group was formed to contribute, review and validate laboratory information standards to support an interoperable pan-Canadian electronic health record (EHR) as defined by Infoway.
- *Canadian Association of HIV Clinical Laboratory Specialists* - This national network is dedicated to the advancement of excellence in HIV laboratory practices and services.

In addition to laboratory testing, the PHL is active in research and special projects in microbiology and infectious disease epidemiology as part of its broader mandate to protect public health. These projects are undertaken through close partnership with hospitals and agencies both within the province and nationally involving numerous health care professionals. The following outlines recent and significant projects:

## 9.0 HIGHLIGHTS AND ACCOMPLISHMENTS

### ➤ H1N1 Pandemic

Immediately following the emergence of the H1N1 influenza pandemic in Mexico in late April 2009, the PHL activated its planned pandemic response. Through intense provincial surveillance, the first case of H1N1 in the province was detected during the second week of June 2009. The second wave that commenced in October was far more severe and widespread, as was anticipated. The trend of the first and the second wave of the H1N1 pandemic in the province is captured in the PHL statistics in Appendix B.

Throughout the pandemic, the PHL played a critical role in both diagnostic and surveillance services. Testing of hundreds of specimens on a daily basis 24/7, with accurate results and rapid turnaround time became an absolute necessity. The success of the PHL's role and response during the pandemic is attributable to the extensive planning and preparations that went into the PHL public health emergency preparedness planning, especially the pandemic initiative. This preparation commenced in early 2006, with steps taken to upgrade testing technologies to allow for strain-specific identification of the flu virus, and to ensure high throughput and rapid turnaround time. The PHL acquired the necessary specialized equipment, ensured in-house training and expertise, and stockpiled reagents and supplies required to meet the likely unprecedented demand. The PHL also created a network of hospital-based microbiology laboratories a few years ago to ensure rapid response and communication during public health emergencies. This was instrumental to the overall provincial laboratory response and co-ordination during the pandemic.

The PHL tested about 4500 specimens from suspected cases of H1N1 during the pandemic. In anticipation of the pandemic, the PHL had in place sophisticated molecular methodologies, which facilitated rapid testing of a large number of specimens within a few hours. With traditional methods in use previously, H1N1 diagnosis would have been severely limited and taken several days.

➤ **Emergency Response**

The PHL plays an important role in ensuring that the province can respond effectively to potential bioterrorism threats. The laboratory's level III facility and technical expertise are integral parts of our rapid response system to bioterrorism threats. PHL employees, as well as Environmental Health Officers across the province, have been trained to handle suspicious packages and to deal with biohazard events. The PHL also ensures that it maintains adequate and satisfactory response capacity to biohazard/ bioterrorist threats through an annual re-certification of the response team members.

➤ **Accreditation**

The PHL has been vigilant in following recommended laboratory procedures and practices. It has traditionally ensured strict quality control protocols and practices and routinely participated in various proficiency testing programs to monitor performance level, accuracy and competency. It has also made every effort to provide a safe working environment for its employees. In 2008-2009, PHL initiated and has made progress towards obtaining International Standard Accreditation with ISO 15189. In 2009-2010 the PHL Quality Manager joined the team of Quality Coordinators for Eastern Health. This team is managed by an Eastern Health Quality Program Manager whose primary responsibility is to lead the team to obtain accreditation through the Ontario Laboratory Accreditation (OLA) program. This program is managed by the Quality Management Program – Laboratory Services (QMP-LS) under the Ontario Medical Association. OLA requirements are based on ISO 15189 requirements and includes other consensus standards and guidelines of Ontario and Canadian law and generally accepted principles of good laboratory practice.

## 10.0 MISSION \*

The 2008-2011 Business Plan identified the following mission for the PHL:

In pursuit of this mission the PHL will focus on securing and improving the PHL laboratory testing capacity to respond to any and all infectious diseases threats to the provincial public health and respecting the delivery of its laboratory services. This mission supports the Department's strategic direction of strengthening public health capacity by contributing to surveillance for communicable disease, health emergency planning, and environmental health policy. The PHL mission for the 2008-2011 planning period is:

By 2011 the PHL will have secured technical, professional and human resource capabilities for the timely detection, surveillance, prevention and control of and protection from infectious diseases in the province.

**Measure:** Secured technical, professional and human resources capabilities

**Indicators:**

- Continued advancement of existing resources
- Improved capacity in identified areas, i.e., technical, professional and human resources
- Focused response to any and all threats relating to infectious diseases
- Increased security in the delivery of laboratory services

The 2010-2011 Report will provide progress on achieving the mission.

\* To access a complete version of the PHL 2008-2011 Business Plan or the DHCS 2008-2011 Strategic Plan, please contact the Department of Health and Community Services, Tel: 709-729-4984 or email: [healthinfo@gov.nl.ca](mailto:healthinfo@gov.nl.ca) or visit, <http://www.health.gov.nl.ca/health/>

## 11.0 REPORT ON PERFORMANCE 2009-2010

As 2009-2010 represents Year Two in a three year planning cycle (2008-2011) the remainder of this report will document the progress towards the goal and annual objectives in 2009-2010 and the indicators for 2010-2011.

PHL is an important and integral part of the provincial and national public health system infrastructure, and must maintain an adequate range of testing services, as well as have response capacity and expertise to respond to public health emergencies. In keeping with Government's objective to protect the health of people in the province, measures were taken to enhance the province's ability to respond to public health emergencies involving infectious agents, especially pandemic influenza.

### **Strategic Issues**

The DHCS has set four strategic directions for the period of 2008-2011. The PHL's Business Plan focuses on the strategic direction of strengthening public health capacity. The core functions of the public health system include population health assessment, health surveillance, prevention, health promotion and health protection.

The ability of the providers to fulfill public health functions is dependent on the strength and capacity of the supporting infrastructure. This requires a sufficient, competent and appropriately distributed workforce, adequate resources, organizational capacity, and an ability to manage information for decision making. Health and community system responsiveness to public health issues and the broad planning for disasters and emergencies need to be strengthened. This requires a strategic focus to collectively address:

- Organization of the provincial public health structure;
- Fiscal and human resources for public health;
- Surveillance for communicable disease control;
- All hazards emergency preparedness in the health and community services system;
- Immunization management, including vaccine inventory control and immunization.



## **Strategic Issues in the 2008-2011 Strategic Plan are:**

### **ISSUE 1: Pandemic Flu Response Capacity**

The threats of a public health emergency triggered by events like a flu pandemic, food or water borne outbreaks, emergence of exotic diseases or terrorist attack are within the realm of possibility in North America. With Newfoundland and Labrador's proximity in travel routes and as a point of entry from European countries, the threat of an exotic disease or a virulent pathogen being imported into the province is real. Such an event could have a significant impact on national and interprovincial public health security. As part of its continued improvement initiative, the PHL maintained efforts to review and update all its services and capabilities with a focus on improved access to testing and turnaround time. Work continued in assessing the province's capabilities to respond to emergencies, in particular to the impending pandemic flu and outbreak management. Progress in this strategic issue will increase provincial laboratory surveillance capacity and preparedness to deal with issues in a more co-ordinated and informed manner across regions. This supports the strategic direction of strengthened public health capacity.

**Goal:** By March 31, 2011, PHL will have enhanced provincial laboratory response capacity to provide the required laboratory testing services for pandemic flu or other severe infectious disease risks to public health.

**Measure #1:** Enhanced provincial laboratory response capacity

#### **Indicators:**

- Increased throughput and improved turnaround time for identification of pathogens
- Improved access to required pandemic flu laboratory reagents and supplies
- Integrated databases with health regions
- Signed contract with appropriate suppliers of test kits and reagents
- Established realistic reporting times on key tests

**Annual Objective:** By March 31, 2010, PHL will have developed information systems and a communication plan for its clients to be deployed in public health emergencies associated with the pandemic flu and other infectious disease outbreaks.

**Measure:** Developed information systems and a communication plan

INDICATORS	Progress in 2009-10
Developed information systems.	Established electronic laboratory information systems for multiple site use to achieve maximum efficiency and speed. This was considered highly beneficial overall, especially during the H1N1 pandemic.
Electronic data transfer will be fully implemented throughout the province.	Electronic data transfer of lab testing orders and results has been established, but currently linking only the major users of the PHL services in Eastern, Central and Western health regions. The linking of labs in the Labrador-Grenfell health region is pending resolution of local logistics.
Reduced duplication with Eastern Health Laboratory Information System.	This has been accomplished through the linking of PHL information system with Eastern Health.
Greater integration of laboratory data management.	This has been accomplished through the linking of PHL information system with the major users of the PHL services.
Communication plan developed.	The PHL has established a communication plan at both provincial and national levels for deployment in public health emergencies associated with the pandemic flu and other infectious disease outbreaks. This has been implemented through the establishment of a network of provincial laboratories involved in the diagnosis and surveillance of infectious diseases. This included a list of key contacts representing infectious disease related laboratory services, public health officials and clinicians and mode and frequency of communication based on circumstances.

### Discussion of Results

The H1N1 pandemic emerged suddenly in April 2009. Because of the plans put in place in anticipation of the pandemic, the PHL was fully ready and could process hundreds of specimens on a daily basis 24/7, with accurate results and rapid

turnaround time. There was a sufficient supply of all reagents and specimen collection kits, and PHL ensured prompt and accurate communication at all levels as required. The success of the PHL's role and response capacity during the pandemic is attributable to the extensive planning and preparations that went into the PHL public health emergency preparedness, especially the pandemic initiative.

**Indicators for Annual Objectives:**

**Based on progress in 2009-2010, the indicators for the 2010-2011 annual objective follows:**

**Objective:** By March 31, 2011, PHL will have pilot tested and evaluated laboratory response protocols in dealing with pandemic flu and other emergency situations dealing with infectious disease outbreaks.

**Measure:** Pilot tested and evaluated laboratory response protocols

**Indicators:**

- Obtained key stakeholder and client input through pilot testing.
- Established electronic data transfer to the full Labrador-Grenfell health region.
- Identified strengths and weakness in the response protocol through pilot testing.
- Identified action items for areas of improvement through pilot testing.

## **ISSUE 2: Accreditation**

The accreditation of laboratories across Canada will ensure that all laboratories meet the highest standards, quality and reliability. In 2010 a memorandum of understanding was signed between the Government of Newfoundland and Labrador and the Ontario Laboratory Accreditation (OLA) program. In May 2010, the Government of Newfoundland and Labrador mandated that all medical laboratories across the province be accredited under the OLA standards. As a result, the accreditation goal statement as presented in the 2008-2011 Business Plan for the PHL is now dated. The following section retains the wording as in the 2008-2011 Business Plan and reports on progress of the ISO 15189 standard in the broader context of the OLA requirements.

Specifically, the OLA standard is the ISO 15189, an International Standard, in addressing the requirements for accreditation of medical laboratories. OLA requirements are based on ISO 15189 requirements, but include other consensus standards and guidelines of Ontario and Canadian law and generally accepted principles of good laboratory practice.

In 2009-2010 the PHL Quality Manager joined the team of Quality Coordinators from Eastern Health. This team is managed by a dedicated Quality Program Manager at Eastern Health, whose primary responsibility is to lead the team to obtain accreditation under OLA program. Accreditation of PHL laboratory services remains a priority to ensure the highest standards, quality and reliability are met. This is consistent with Government's goal to protect the health of people in Newfoundland and Labrador.

**GOAL:** By March 31, 2011 PHL will have achieved the status of ISO 15189 accreditation in selected areas of its laboratory services.

**Measure:** ISO accreditation status achieved

### **Indicators:**

- Confirmation of accreditation award received
- Accreditation certificate publicly displayed
- Accreditation status acknowledged by DHCS
- Accreditation symbol included on promotional material

**Annual Objective:** By March 31, 2010 PHL will have completed initial site inspection requirements.

**Measure:** Completed initial site inspection requirements

INDICATORS	PROGRESS IN 2009-10
Selected areas identified	The focus areas for initial accreditation will be bacteriological drinking water testing service and diagnostic and screening service for HIV, Hepatitis B and Hepatitis C, and HPV.
Finalization of all required documents	Approximately 90% of all required documents have been finalized. Standard Operating Procedures have been written, reviewed, approved and uploaded to the PHL's shared network drive. Work is on-going in the remaining areas, which were delayed due the H1N1 pandemic and the joining with Eastern Health's accreditation initiative.
Site preparation completed	Responding to the H1N1 pandemic was a priority issue, and this impacted the progress and other initiatives related to accreditation. PHL is working with Eastern Health to complete related activities.
Staff education completed on accreditation	Completed. Meetings and discussion were held, and personnel trained to write Standard Operating Procedures and to conduct internal auditing.
External consultant's approval to proceed in place	The external consultant's, i.e., Quality Program Manager, approval to proceed is in place. The PHL Quality Manager has started working with the Eastern Health's Quality Program Manager, and joined Eastern Health's Quality Coordinators Team. This facilitated the external consultant's approval to proceed and the work continues based on the consultant's direction.

### Discussion of Results

While all activities concerning accreditation have progressed, some could not be completed, including documentation and site preparation. The H1N1 pandemic was a priority for the PHL most of the year. During the year, the benefits of joining with

Eastern Health in developing PHL's documents, plans and milestones were realized. Accordingly, in 2009, PHL Quality Manager joined the Quality Coordinator team of Eastern Health. This team is managed by a Quality Program Manager, Medical Services & Diagnostics, at Eastern Health, whose prime responsibility is to lead the team to laboratory accreditation.

All high level policies for PHL have been written, reviewed and approved. All Quality Control (QC) practices and Standard Operating Procedures are being reviewed, updated as necessary and implemented. It is anticipated that PHL will achieve accreditation by 2013. Based on the progress in 2009-2010, the indicators for the 2010-2011 annual objectives are as follows:

**Objective:** By March 31, 2011, PHL will have completed the necessary steps to achieve ISO accreditation.

**Measure:** Completed preparations to achieve ISO accreditation

**Indicators:**

- Finalization of all required documents
- Completed site preparations
- Continued partnership with Eastern Health's Quality Coordinators Team
- Completed Quality Manual
- Updated Standard Operating Procedures
- Continued staff education on accreditation standards and requirements

## 12.0 OPPORTUNITIES AND CHALLENGES

### ➤ **Electronic Data Transfer/Networking**

The long term goal of electronically linking the PHL information system with databases of microbiology laboratories in the major hospital in the province has been realized. Electronic data transfer/networking allows for the controlled access and direct exchange of data from one laboratory information system to another. This has eliminated duplication and considerable paper work with the real-time exchange of laboratory data with high efficiency. There are further opportunities to maximize this system, and towards this end, Medinet implementation has been initiated with the Labrador-Grenfell Health region. The testing of the Grenfell Medinet is now in progress and the Labrador region to follow after successful completion at the Grenfell site.

### ➤ **Emergency Response/Bioterrorism**

The PHL is vigilant in its efforts to respond to potential bioterrorism threats to the public. The laboratory's CL3 facility and technical expertise are integral parts of the PHL's rapid response system. In July 2010, a refresher training course will be offered to a select group of Environmental Health Officers across the province and to members of the PHL Emergency Response Assistance Team (ERAP), who have been previously trained in the handling of suspicious packages and to deal with biohazard/bioterrorism threats.

The PHL also provided training to laboratory technologists across the province in the handling of clinical specimens associated with such threats. However, it is important to periodically review the level of competency and to offer refresher courses. This is an ongoing initiative that requires co-ordination, continued trainee commitment, interest and funding. A review of protocols for the handling of clinical specimens is part of the agenda for the provincial Microbiology Laboratory Network meeting scheduled for the fall of 2010.

➤ **Staff Retention and Recruitment**

Several senior laboratory and management employees of the PHL with over 35 years of service will be retiring within the next few years. Their replacement may pose to be a major challenge. In response, the PHL has developed a succession management plan to help address this challenge.

➤ **Accreditation**

In addition to daily operations, the accreditation process is a major undertaking. It requires dedicated personnel and considerable knowledge and tenacity to meet or exceed the requirements of ISO 15189, which have since been enhanced to Ontario Laboratory Accreditation (OLA) standards. While the original goal was for the PHL to obtain ISO 15189 accreditation by 2011, due to the considerable work that still remains to be done and the change in the objective to obtain OLA accreditation, completion of this objective has been postponed to 2013.



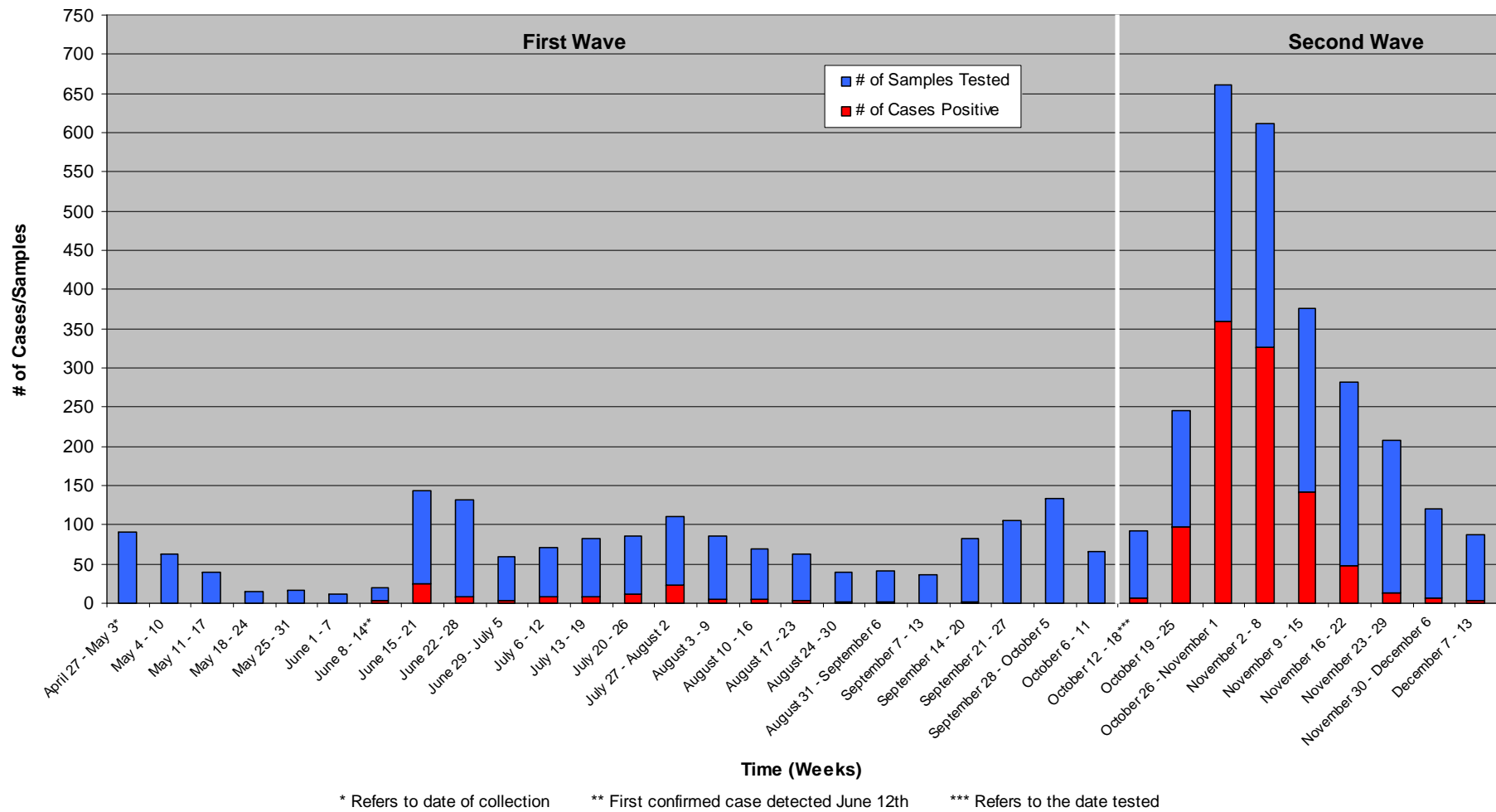
## **Appendix A: Listing of All Patient and Public Health-Related Diagnostic and Screening Services Currently Provided By NL Public Health Laboratory**

- Adenovirus -antigen detection, DFA, culture
- Anthrax –microscopy, culture, PCR
- Arbovirus –referred
- Astrovirus – EIA
- Botulism –referred
- Brucella –culture, serology
- Bartonella –referred
- Chl. Psittaci –referred
- Chl. Trachomatis –PCR, culture
- C.difficile – EIA
- CMV –PCR, culture
- Coxiella –referred
- CJK –referred
- C.diphtheria –culture, serology (referred out)
- E.coli 0157- culture, toxin
- EBV – serology, PCR
- Enterovirus –culture
- Farmer’s lung –referred
- Food borne bacterial disease –culture various agents
- Francisella –culture
- Gonorrhoea –PCR, culture confirmation
- Hantavirus- referred
- H.pylori –serology
- Hepatitis A-serology
- Hepatitis B-serology
- Hepatitis C –serology, PCR
- Hepatitis D-referred
- Hepatitis E-referred
- Herpes simplex virus – microscopy, culture, serology, PCR
- HIV –serology, PCR
- HTLV I/II – serology
- HHV-6, HHV-7, HHV-8, -referred
- HPV – hybrid capture
- Influenza – DFA, culture, PCR
- Legionella –antigen detection
- Lyme Disease –referred
- Measles –serology

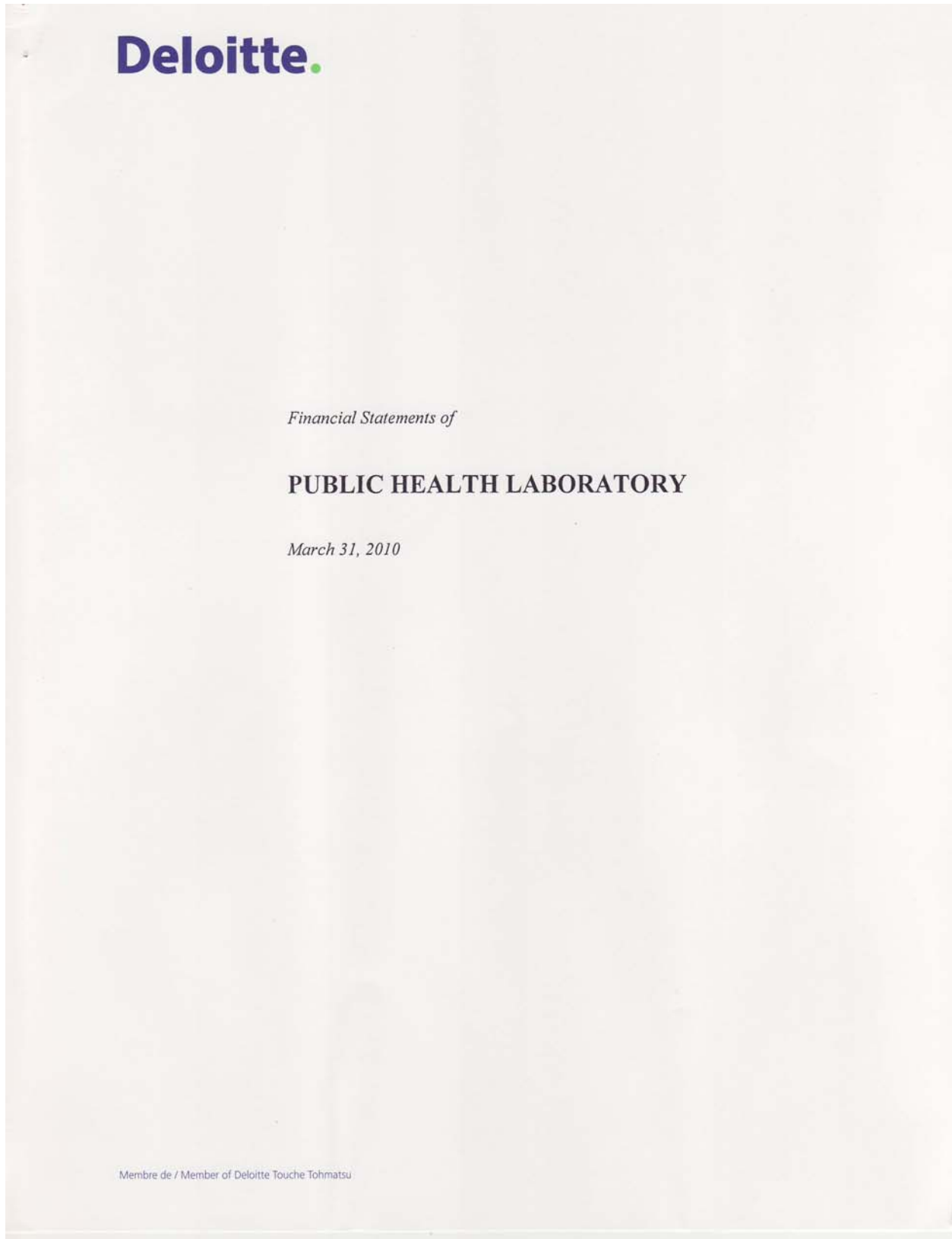
## Continued Listing of All Patient and Public Health-Related Diagnostic and Screening Services Currently Provided By NL Public Health Laboratory

- Meningococcus – typing, susceptibility
- MRSA –ID, susceptibility
- Mumps – serology, culture, PCR(referred)
- Mycobacteria –microscopy, culture, susceptibility, PCR
- Mycology(Fungus) – microscopy, culture
- Mycoplasma –serology, culture
- Norovirus – EIA
- Parainfluenza – DFA, culture
- Parasitology –microscopy, EIA, serology
- Parvovirus – serology
- Pertussis –culture
- Poliomyelitis- referred
- Rabies –referred
- Rickettsia – referred
- Rotavirus – antigen detection
- RSV – DFA, culture
- Rubella –serology
- Salmonella –typing
- Shigella –typing
- Syphilis – serology
- Tetanus- referred
- Toxoplasma –serology, PCR(referred)
- VZV – serology, culture
- West Nile V – serology, PCR(referred)
- Reference service for culture identification-various bacteria and fungi
- Water testing service for municipal, provincial and private agencies/individuals
- Dairy products- bacterial quality testing
- Bacterial culture media preparation for several laboratories.

## Appendix B: PHL H1N1 Pandemic Influenza Statistics, April – December 2009



**Appendix C: Audited Financial Statement for the Fiscal year April 1, 2009 to March 31, 2010**



**PUBLIC HEALTH LABORATORY**  
March 31, 2010

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## Auditors' Report

To the Management Committee of  
Public Health Laboratory

We have audited the statement of financial position of the Public Health Laboratory as at March 31, 2010 and the statements of operations and deficit and cash flows for the year then ended. These financial statements are the responsibility of management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Public Health Laboratory as at March 31, 2010 and the results of its operations and its cash flows for year then ended in accordance with Canadian generally accepted accounting principles.

*Deloitte & Touche LLP*

Chartered Accountants  
May 31, 2010

**PUBLIC HEALTH LABORATORY**  
**Statement of Operations and Deficit**  
Year Ended March 31, 2010

	2010	2009
	\$	\$
<b>Revenue</b>		
Government of Newfoundland and Labrador	4,475,251	3,998,276
<b>Expenditures</b>		
Wages and benefits	1,997,646	1,742,049
Laboratory supplies	1,741,893	1,694,306
Operating supplies	303,255	210,926
Professional fees	243,275	199,650
Repairs and maintenance	87,691	42,815
Travel	49,214	34,252
Printing, stationery and office	37,581	33,483
Minor equipment	14,921	49,500
Telephone	6,799	11,252
	<u>4,482,275</u>	<u>4,018,233</u>
Excess of expenditures over revenue before undernoted items	(7,024)	(19,957)
Amortization of capital assets	(92,040)	(82,728)
Amortization of deferred capital contributions	111,196	71,586
Increase in severance pay accrual	(11,289)	(51,646)
	<u>7,867</u>	<u>(62,788)</u>
Excess of revenue over expenditures (expenditures over revenue)	843	(82,745)
Deficit, beginning of year	(956,568)	(873,823)
<b>Deficit, end of year</b>	<u>(955,725)</u>	<u>(956,568)</u>

**PUBLIC HEALTH LABORATORY**  
**Statement of Financial Position**  
Year Ended March 31, 2010

	2010	2009
	\$	\$
<b>Assets</b>		
Current assets		
Cash	500	500
Accounts receivable	39,913	145,424
Due from Eastern Regional Health Authority	70,533	-
Prepaid expenses	77,942	65,310
	<u>188,888</u>	<u>211,234</u>
Capital assets (Note 4)	358,427	324,898
	<u>547,315</u>	<u>536,132</u>
<b>Liabilities</b>		
Current liabilities		
Accounts payable and accrued liabilities	135,435	83,640
Due to Eastern Regional Health Authority	-	204,683
Deferred revenue	75,000	75,000
Deferred revenue - capital	39,732	-
Current portion of accrued severance pay	133,656	33,814
Accrued vacation pay	389,672	291,837
	<u>773,495</u>	<u>688,974</u>
Accrued severance pay	371,118	459,671
Deferred capital contributions (Note 6)	358,427	344,055
	<u>1,503,040</u>	<u>1,492,700</u>
<b>Deficit</b>		
Deficit	(955,725)	(956,568)
	<u>547,315</u>	<u>536,132</u>

Approved by the Board

 Trustee  Trustee



**PUBLIC HEALTH LABORATORY**

**Statement of Cash Flows**

Year Ended March 31, 2010

	2010	2009
	\$	\$
<b>Operating activities</b>		
Excess of revenue over expenditures (expenditures over revenue)	843	(82,745)
Adjustments for:		
Amortization of capital assets	92,040	82,728
Amortization of deferred capital contributions	(111,196)	(71,586)
Increase in severance pay accrual	11,289	51,646
Change in non-cash operating working capital (Note 5)	7,024	19,957
	-	-
<b>Financing activity</b>		
Deferred capital contributions	125,569	307,890
<b>Investing activity</b>		
Purchase of capital assets	(125,569)	(307,890)
Change in cash	-	-
Cash, beginning of year	500	500
<b>Cash, end of year</b>	<b>500</b>	<b>500</b>

# PUBLIC HEALTH LABORATORY

## Notes to Financial Statements

March 31, 2010

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### 1. NATURE OF OPERATIONS

The purpose of the Public Health Laboratory (the "Laboratory") is to act as the provincial reference laboratory centre for clinical and public health microbiology and infectious disease surveillance and control. The Laboratory offers specialized and reference laboratory services to all physicians, hospitals, clinics and health related agencies in the Province.

The Laboratory is a not-for-profit organization and is exempt from income taxes.

### 2. CHANGE IN ACCOUNTING POLICIES

Effective April 1, 2009, the Laboratory adopted the amendments issued by the Canadian Institute of Chartered Accountants ("CICA") for section 1540 "Cash flow statement", section 4400 "Financial statement presentation by not-for-profit organizations", section 4430 "Capital assets held by not-for-profit organizations", section 4460 "Disclosure of related party transactions by not-for-profit organizations", and Section 4470 "Disclosure of allocated expenses by not-for-profit organizations". The application of these standards did not have any impact on the financial statements of the Laboratory.

### 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Laboratory has elected to use the exemption provided by the CICA permitting not-for-profit organizations not to apply Sections 3862 and 3863 of the CICA Handbook which would otherwise have applied to the financial statements of the Laboratory for the year ended March 31, 2010. The Laboratory applies the requirements of Section 3861 of the CICA Handbook.

The financial statements have been prepared in accordance with Canadian generally accepted accounting principles for not-for-profit organizations, the more significant of which are as follows:

#### *Basis of accounting*

The financial statements include only the assets, liabilities, revenue and expenditures relating to the operations carried on under the name of the Public Health Laboratory.

#### *Cash*

Cash includes cash on hand and balances with banks.

#### *Capital assets*

Capital assets are recorded at cost. Rates and bases of amortization applied to write off the cost of capital assets over their estimated lives are as follows:

Equipment	15%, straight line
Computer equipment	20%, straight line

**PUBLIC HEALTH LABORATORY**  
**Notes to Financial Statements**  
March 31, 2010

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**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

*Impairment of assets*

Long-lived assets are tested for recoverability whenever events or changes in circumstances indicate that their carrying amount may not be recoverable. The amount of any impairment loss is determined as the excess of the carrying value of the asset over its fair value.

*Capital contributions*

Capital contributions are recorded as deferred capital contributions and amortized to income on the same basis as the related capital assets are amortized. Capital contributions on non-depreciable capital assets are recorded as direct decreases in deficit.

*Accrued severance pay*

Severance pay is accounted for on an accrual basis and is calculated based upon years of service and current salary levels. Severance pay is only recorded in the accounts for employees who have a vested right to receive such a payment. No provision for severance pay is recorded in the accounts for any employee who has less than nine years of service. Severance is payable when the employee ceases employment with the Laboratory.

*Revenue recognition*

Revenue is recognized as earned and when collection is reasonably assured. Revenue received for a future period is deferred until that future period and reflected as deferred revenue.

The Laboratory is dependent on funding from the Government of Newfoundland and Labrador, Department of Health and Community Services.

*Pension costs*

Employees of the Laboratory are members of the Public Service Pension Plan and the Government Money Purchase Plan administered by the Government of Newfoundland and Labrador (the "Government"). Contributions to the plans are required from both the employees and the Laboratory. The annual contributions for pensions are recognized in the accounts on a current basis and amounted to \$103,566 for the year ended March 31, 2010 (2009 - \$97,446).

*Vacation pay and other benefits*

Vacation pay and other benefits are recorded in the accounts of the Laboratory on the accrual basis.

**PUBLIC HEALTH LABORATORY**  
**Notes to Financial Statements**  
 March 31, 2010

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**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

*Financial instruments*

The Laboratory's financial assets and liabilities are generally classified and measured as follows:

<u>Asset/Liability</u>	<u>Classification</u>	<u>Measurement</u>
Cash	Held for trading	Fair value
Accounts receivable	Loans and receivables	Amortized cost
Due from Eastern Regional Health Authority	Loans and receivables	Amortized cost
Accounts payable and accrued liabilities	Other liabilities	Amortized cost
Due to Eastern Regional Health Authority	Other liabilities	Amortized cost

Other balance sheet accounts do not meet the criteria to be considered financial instruments.

The Laboratory has determined that it does not have derivatives or embedded derivatives.

*Use of estimates*

In preparing the Laboratory's financial statements in conformity with Canadian generally accepted accounting principles management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and reported amounts of revenue and expenditures during the year. Actual results could differ from these estimates.

**4. CAPITAL ASSETS**

	2010			2009	
	Cost	Accumulated Amortization	Net Book Value	Cost	Net Book Value
	\$	\$	\$	\$	\$
Equipment	2,024,075	1,665,648	358,427	1,898,506	324,898
Computer equipment	602,290	602,290	-	602,290	-
	2,626,365	2,267,938	358,427	2,500,796	324,898



**PUBLIC HEALTH LABORATORY**  
**Notes to Financial Statements**  
 March 31, 2010

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**5. SUPPLEMENTAL CASH FLOW INFORMATION**

	2010	2009
	\$	\$
Change in non-cash operating working capital		
Accounts receivable	105,510	(107,146)
Due from Eastern Regional Health Authority	(70,533)	-
Prepaid expenses	(12,632)	(65,310)
Accounts payable and accrued liabilities	51,795	(2,922)
Due to Eastern Regional Health Authority	(204,683)	312,882
Accrued vacation pay	97,835	50,223
Deferred revenue	-	(167,770)
Deferred revenue - capital	39,732	-
	<u>7,024</u>	<u>19,957</u>

**6. DEFERRED CAPITAL CONTRIBUTIONS**

Deferred capital contributions represent the unamortized portion of restricted contributions related to capital assets, which will be reported in revenue in future accounting periods. Deferred capital contributions are amortized on a basis equal to the amortization for the related capital asset purchased.

The changes in deferred capital contributions balance for the year are as follows:

	2010	2009
	\$	\$
Balance, beginning of the year	344,055	107,751
Grants received	125,568	307,890
Amortization	(111,196)	(71,586)
Balance, end of year	<u>358,427</u>	<u>344,055</u>

**7. RELATED PARTY TRANSACTIONS**

The Laboratory coordinates with the Eastern Regional Health Authority to provide a reference laboratory centre. Transactions between these related parties are measured at their exchange value.

**PUBLIC HEALTH LABORATORY**  
**Notes to Financial Statements**  
March 31, 2010

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**8. CAPITAL MANAGEMENT**

The capital structure of the Laboratory consists of deficit. The Laboratory's objective when managing capital is to ensure it maintains adequate capital to support its continued operations.

The Laboratory is not subject to externally imposed capital requirements.

**9. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT**

*Financial risk factors*

The Laboratory has exposure to credit risk and liquidity risk. The Laboratory's Management Committee has overall responsibility for the oversight of these risks and reviews the Laboratory's policies on an ongoing basis to ensure that these risks are appropriately managed. The source of risk exposure and how each is managed is outlined below.

*Credit risk*

Credit risk is the risk of loss associated with a counterparty's inability to fulfil its payment obligation. The Laboratory's credit risk is primarily attributable to accounts receivable. Management believes that the credit risk with respect to accounts receivable is not material.

*Liquidity risk*

Liquidity risk is the risk that the Laboratory will not be able to meet its financial obligations as they become due. As at March 31, 2010 the Laboratory had cash of \$500.

*Fair value*

The fair value of the Laboratory's short-term financial instruments approximate the carrying value due to the short-term maturity and normal credit terms of those instruments.