

PUBLIC HEALTH LABORATORY

ANNUAL REPORT

DETECTION

PREVENTION

PROTECTION

SURVEILLANCE

ASSESSMENT

INNOVATION

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NEWFOUNDLAND PUBLIC HEALTH LABORATORY

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NEWFOUNDLAND PUBLIC HEALTH LABORATORY

DIRECTOR'S MESSAGE

I am pleased to submit Annual Report for the Public Health Laboratory for the fiscal year 2006-2007. The contents of this report are deemed accurate to the best of my knowledge and I accept the responsibility for the information contained in this report.

During the fiscal year the PHL continued to fulfill its mandate as the provincial laboratory centre for infectious disease surveillance and control and provide routine, specialized and reference diagnostic and screening services in clinical and public health microbiology to all hospitals, clinics and health care agencies and professionals in the province. The PHL has also continued with its research and developmental activities as part of its mandate.

Further, the PHL continued to make progress in certain key areas pertaining to its mandate and operation. These include our succession management plan, expansion of our existing electronic data transfer/networking system to additional hospital laboratories in Central and Eastern health regions, pandemic flu preparedness plan, and accreditation of selected services offered by the PHL. The above undertakings are recognized as part of the overall goals and strategic directions of the Department of Health and Community Services.

The PHL is an essential component of our provincial and national public health system infrastructure, and it is our commitment to strive for excellence in various service areas as well as on research front.

Sam Ratnam, Ph.D., MPH, FCCM



NEWFOUNDLAND PUBLIC HEALTH LABORATORY

MOTTO, ROLE AND FUNCTION

MOTTO

- **Detection**
- **Prevention**
- **Protection**
- **Innovation**
- **Surveillance**
- **Assessment**

MANDATE

- Act as the provincial laboratory centre for infectious disease surveillance, control and epidemiology
- Provide specialized and reference laboratory services in clinical and public health microbiology
- Pursue research and development activities in the above areas

ROLE AND FUNCTION

As the provincial reference laboratory centre for clinical and public health microbiology, infectious disease epidemiology, immunization and community health, the PHL provides:

- Advanced technologies and high level of expertise in laboratory diagnostic and screening services
- Specialized and reference laboratory services in clinical and public health microbiology to all physicians, hospitals, clinics and health-related agencies in the province
- Laboratory outbreak investigation and control
- Laboratory-based surveillance of communicable disease incidence and prevalence
- Rapid response to exigencies and provision of timely information to help guide appropriate action
- Consultative and educational services and undertakes research and development activities in pertinent areas



NEWFOUNDLAND PUBLIC HEALTH LABORATORY



Newfoundland Public Health Laboratory
Suite 1, 100 Forest Road
St. John's, NL
A1A 3Z9

www.publichealthlab.com

Hours of operation are from 8:30 A.M. to 4:00 P.M. Emergency services are available 24/7. However, this is limited to authorized health officials only.

The laboratory employs 25 staff members and has nine service areas.

- SEROLOGY
- VIROLOGY
- BACTERIOLOGY
- PARASITOLOGY
- MYCOLOGY
- MYCOBACTERIOLOGY
- SANITARY/ENVIRONMENTAL MICROBIOLOGY
- MEDIA PREPARATION
- LAB SUPPLIES CENTRE



NEWFOUNDLAND PUBLIC HEALTH LABORATORY

SHARED COMMITMENTS

The PHL functions as a division of the Department of Health and Community Services with the Director of the PHL reporting to the Chief Medical Officer of Health. With a provincial mandate it works closely with the other divisions of the DHCS, all health regions, agencies and authorities throughout the province, particularly hospitals and laboratories and public health personnel in each health region. The PHL provides routine and specialized services in clinical and public health microbiology to facilitate detection, prevention and control of infectious diseases, with a shared commitment in infectious disease surveillance, prevention and control efforts.

Bacteriological water quality testing service for public health is provided to private individuals, communities, municipalities, private and public agencies etc, throughout the province. Besides the main laboratory in St. John's, this service is offered through external water testing sites established with the cooperation and support of 6 hospital laboratories across the province with a shared commitment to provide ready access to water testing services in various regions.

Over the past few years, the PHL has been working in close collaboration with the Information Technology Department of the Eastern Health towards establishing complete electronic data transfer of laboratory information for the province.

The PHL continues to actively participate in several national networks, working groups and committees that are actively involved with public health, disease prevention, control and surveillance etc, at the international, national and provincial levels, some of which are listed below.

CANADIAN PUBLIC HEALTH LABORATORY NETWORK (CPHLN), whose main focus is providing a forum for exchange of information and identification and establishment of common goals and priorities at inter-provincial and national levels. CPHLN is one of 6 Expert Groups of the recently established Pan Canadian Public Health Network, and has a major role at the national level. Membership includes all PHL Directors in the country. There are several committees and working groups under the CPHLN umbrella. The PHL is an active member of these groups.

- **CANADIAN TUBERCULOSIS LABORATORIES TECHNICAL NETWORK (CTLTN)** 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 prime objective is to ensure best practices in microbiology testing of drinking water for public health purposes.
- ✦ **BIO-TERRORISM SUBCOMMITTEE**, whose main 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.

CANADA HEALTH INFOWAY - PAN-CANADIAN LAB STANDARDS GROUP - The PHL has representation on the this national group formed to contribute to, review and validate laboratory information standards to support the interoperable pan-Canadian electronic health record (HER), and as defined by Infoway as part of the Laboratory Program.

CANADIAN ASSOCIATION OF HIV CLINICAL LABORATORY SPECIALISTS - The PHL is represented on this national network dedicated to the advancement of excellence in HIV laboratory practices and services.

The Director of the PHL has served in many provincial, national and international committees, working groups etc and continues to work with many others. These are listed below.

Chair, HPV Advisory Group, Canadian Public Health Laboratory Network. 2005-
 Co-Chair, Canadian Laboratory Standardization Committee. 2004 –
 Co-Chair, Canadian Public Health Laboratory Network. 2000-2004.
 Member, Provincial Public Health Strategic Plan Steering Committee, 2006-
 Member, Provincial Technical Working Group on Water Quality. 2000-
 Member, Canadian F/P/T Special Task Force on Public Health. 2004-05.
 Member, F/P/T Task Group on Strengthening Public Health System Infrastructure. 2003-04.
 Member, Pan American Health Organization (PAHO) Experts Panel on Rubella and Measles. 2004 -
 Member, WHO Technical Advisory Group. 2003-
 Member, WHO Global Measles Laboratory Network. 2003-
 Member, National Notifiable Diseases Working Group. 2005-
 Member, Provincial Public Health Strategic Plan Steering Committee. 2006-
 Member, International Organization Committee, International HPV Conference. Vancouver 2005.
 Member, Canadian EnterNet Advisory Committee, Health Canada. 2004 -
 Member, Working Group on Measles Elimination in Canada. 1996-
 Member, Expert Advisory Group on Rubella in Canada. 2001-
 Member, Canadian Pandemic Influenza Plan Laboratory Subcommittee. 2000-
 Member, Executive committee, Enteric National Disease Surveillance. 2000-2003.
 Member, Canadian STD Guidelines Working Group. 1996-2004.
 Member, Canadian Integrated Public Health Surveillance. 2000-
 Member, Committee on Provincial Public Health Capacity. 2004.



NEWFOUNDLAND PUBLIC HEALTH LABORATORY

HIGHLIGHTS AND ACCOMPLISHMENTS

ELECTRONIC DATA TRANSFER SYSTEM

Traditionally PHL lab test orders were received on paper requisitions, and results reported in hard copy format and mailed to hospitals and/or physicians. This was inefficient as it entailed long delays in receiving patient results and involved considerable work on both ends.

In 2003, the PHL initiated the first project for direct electronic transfer of test orders and results with the Health Sciences Centre, and was subsequently extended to hospital laboratories in Carbonear, Gander, and Corner Brook. In 2006-07 this service was extended to additional sites covering hospital laboratories in Burin/Clareville and Grand Falls. Currently over 90% of PHL test orders and results are transmitted electronically, realizing a significant improvement in overall efficiency on both ends with considerable reduction in turnaround times together with elimination of duplication and transcription errors. The PHL continued to work on further plans to extend the electronic network to cover the Northern health region.

PAN-CANADIAN ELECTRONIC HEALTH RECORD

The PHL remained an active member of the Canada Health Infoway's pan-Canadian Lab Standards Group (Lab p-CSG) as this project attained completion.

The Lab Standards project has been finalized and is stable for use. Implementation guides are developed for "early-adopter" use although it must be recognized that it is early stages and changes will occur as the early adopters make recommendations for adaptations to the standard.

The Public Health Surveillance standard is at a consultation stage prior to being declared stable for use.

ACCREDITATION

The PHL has always 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. However, it has been our aim to have our facility fully accredited to ensure the highest standard, quality and reliability of all services provided by the PHL. The goal of the Laboratory Accreditation Program is to improve and maintain the quality of laboratory services through quality management system, standard setting, and ensuring the PHL meets or exceeds regulatory requirements. Laboratory accreditation is a highly demanding slow process involving considerable technical and management input and costs. The PHL has initiated this process in 2005 with the formation of an Accreditation Team, and since made significant progress towards achieving this goal by the end of 2008. Quality Manual has been developed and the implementation process commenced. To start with, our focus will be to obtain accreditation of our bacteriological drinking water testing service as well as diagnostic and screening services for HIV, Hepatitis B, Hepatitis C and HPV, and the relevant work in these areas is underway.

PANDEMIC INFLUENZA PREPAREDNESS PLAN

The PHL is the only laboratory facility in the province that has the capability to provide influenza testing services. As such the PHL has a central and critical role in the surveillance, early detection and diagnosis of suspected cases when the pandemic flu emerges. Our preparedness plan calls for strengthening our response capacity with a higher throughput and faster turnaround time using highly sensitive molecular tests. The PHL continued to make significant progress in this area with the development of Pandemic Flu Preparedness Manual, cross-training and introduction of new molecular diagnostic services as well provision for maintaining essential supplies. The PHL also hosted a workshop on pandemic flu preparedness for key laboratory personnel in the province. The PHL continued to work with the Canadian Pandemic Influenza Laboratory Preparedness Network in addressing various issues relating to surveillance and diagnostic services.

EMERGENCY RESPONSE PREPAREDNESS

The PHL continues its vigilance in its efforts to respond to potential bioterrorism threats and public health emergencies relating to infectious agents. The laboratory's Level III facility and technical expertise are integral parts of our rapid response system. PHL employees as well as Environmental Health Officers across the province have been trained to handle suspicious packages and deal with biohazard events. The PHL has also taken part in a national initiative to train laboratory technologists across the province in the handling of clinical specimens and agents associated with bioterrorism. The PHL also ensures that it maintains adequate and satisfactory response capacity to biohazard/ bioterrorist threat through annual re-certification of the response team members. During the fiscal year, two members of this team were certified in the Transportation of Dangerous Goods by Health Canada's Office of Laboratory Security.

ENHANCED LABORATORY SECURITY

Due to the nature of the operation of the PHL, further measures were deemed necessary to secure the PHL from the general area of the Miller Centre. Currently, there is free access to the hallways connecting all operations of the PHL in all three floors. During the fiscal year, measures were taken to secure the PHL from the rest of the building at the Miller Centre with an electronic security system, and the work commenced in the early 2007. This will be completed before the end of 2007.

HPV TRIAGE IN CERVICAL CANCER SCREENING

Backed by several years of its own research and development activity, the PHL introduced HPV testing service in 1998 on a limited basis to all gynecologists in the province as an adjunct test to Pap screening. This was followed by an HPV triage trial using liquid-based cytology in 2005, which facilitated the province-wide introduction of LBC in early 2007. The introduction of LBC has allowed the incorporation of HPV testing in triage of women having borderline Pap abnormality, and as the result, the PHL started playing an important role in the provincial cervical cancer screening program by providing HPV triage service. NL is the first and the only province in the country that offers HPV triage service on a province-wide basis through a publicly funded program.

RESEARCH ON HPV AND CERVICAL CANCER

Following the completion of a major randomized clinical trial on the application of HPV DNA testing for detection of cervical disease involving over 10,000 women in St. John's and Montreal, a new multicentre Canadian study was started. This will further assess the relative merits of testing for certain molecular markers for more accurate and specific identification of the small fraction of women truly at risk for cervical cancer among those having abnormal Pap test. This study will enroll and follow about 2,000 women in 6 sites representing 6 provinces for about 3-5 years to determine the predictive value of the new tests under study. This is the only study of its kind in Canada.



NEWFOUNDLAND PUBLIC HEALTH LABORATORY
WORKLOAD STATISTICS

Section	Tests Performed	Workload Units
Bacteriology Parasitology Mycology	18,711	382,686
Mycobacteriology	2,140	102,720
Sanitary	15,217	357,139
Serology	81,671	622,515
Virology	12,969	328,832
Investigative Studies		63,500
Media		269,083
Quality Assurance		269,083
Proficiency Testing		10,094
Total	130,708	2,285,021

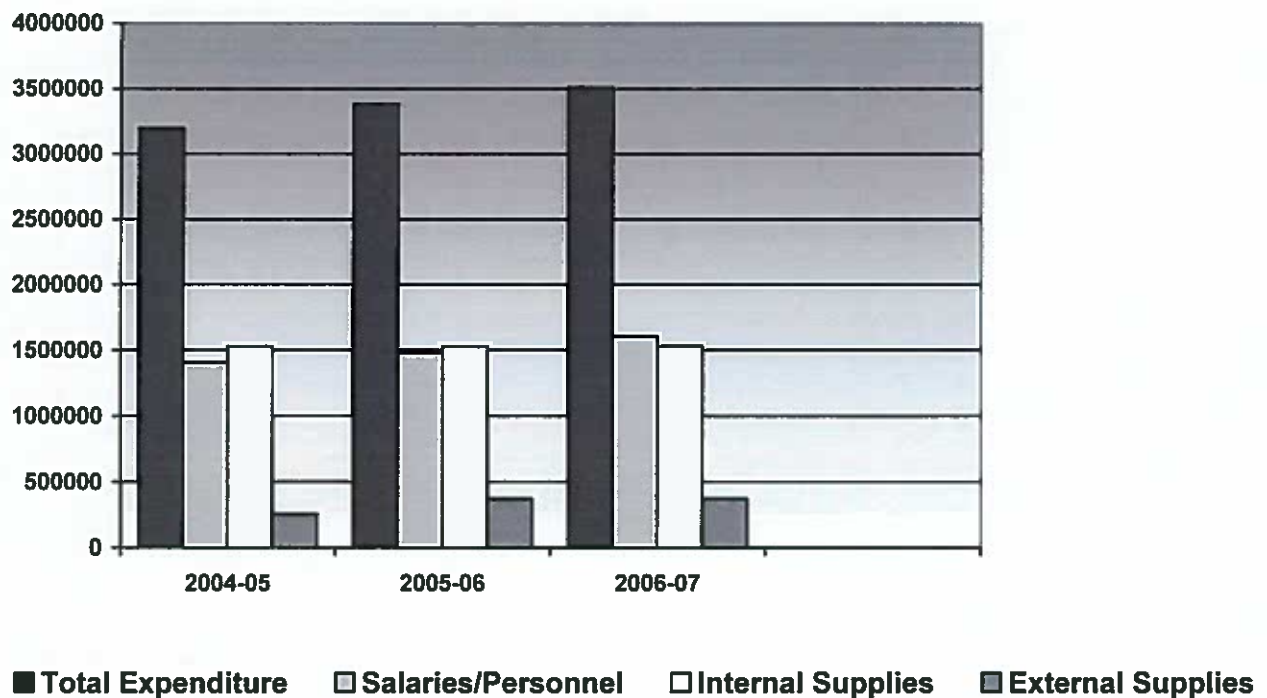


NEWFOUNDLAND PUBLIC HEALTH LABORATORY

BUDGET

The 2006-07 budget was slightly higher than the previous year, with amounts allotted to maintain current service level/inflationary increases and support our management succession plan.

The continued need for new equipment will be one of the challenges in the coming years as ultrafreezers, incubators and centrifuges that were purchased over twenty years ago, need replacement. Also the identified work plans, i.e., the PHL succession plan, Accreditation initiatives, have placed financial burden on our existing budget, and our continued work and focus on these priorities will require additional funding support during the next fiscal year.





NEWFOUNDLAND PUBLIC HEALTH LABORATORY

OPPORTUNITIES AND CHALLENGES



In 2003, our long term goal of electronically linking the PHL database with that of the Health Care Corporation's Microbiology laboratory was realized. This success led to further initiatives to extend our electronic networking to major hospital laboratories in the province with the exception of the northern health region. Electronic data transfer/networking allows for direct exchange of data from one laboratory information system to another and has eliminated duplication and considerable paper work with a real-time exchange of laboratory data with high efficiency. There are further opportunities to maximize this system by bringing on board the northern health region. This however will require additional funding and other logistical support and resources at the concerned sites.



The PHL is constantly vigilant in its efforts to respond to potential bioterrorism threats to the public. The laboratory's Level III facility and technical expertise are integral parts of the PHL's rapid response system. Three years ago a select number of Environmental Health Officers across the province were trained in handling suspicious packages and dealing 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 offer refresher courses. This is an ongoing initiative that requires co-ordination, continued commitment and interest on trainees' part, and funding.



Several senior laboratory and management employees of the PHL with over 35 years of service will be retiring within the next few years and replacing them pose a major challenge. Pending retirement of personnel at senior executive level is of considerable concern. The PHL has developed a succession management plan and every effort will be made to implement the plan to ensure stability and continuity of high quality services and expertise. However, this cannot be dealt with successfully and in a timely manner without careful advance planning, appropriate salary scales and funding.



The PHL continues to work toward its goal of accreditation/certification for various sections of the laboratory, primarily focusing on Sanitary/Environmental and Serology sections to begin with. With the establishment of an accreditation team, work is underway to achieve this goal within the next year or so. However, this is a very time-consuming, slow and tedious project involving all aspects of our operation. While challenging, accreditation of the PHL services is essential to maintain quality assurance, and will undoubtedly provide for continuous quality improvement in laboratory practices.



The threat of pandemic flu has placed a special emphasis on response capacity and preparedness in various areas of our public health and health care delivery system provincially and nationally, and the PHL being an integral part of our provincial and national public health system infrastructure has a central and critical role to play. The PHL has developed its preparedness plan in conjunction with concerned national and provincial bodies. The PHL has taken a proactive role in ensuring our laboratory preparedness with the introduction of molecular technologies, cross-training and provision for maintaining essential supplies etc. However, it is not known to what extent the pandemic flu will impact on our response capacity and whether we will have the resources and ability to adequately meet the demand during a pandemic. Regardless, the PHL will continue to strengthen its response capacity in the coming years, and this will be subjected to adequate funding support.

Deloitte

Financial Statements of

PUBLIC HEALTH LABORATORY

March 31, 2007

PUBLIC HEALTH LABORATORY

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Auditors' Report

To the Board of Trustees of
Eastern Regional Health Authority

We have audited the statement of financial position of the Public Health Laboratory as at March 31, 2007 and the statement of operations and deficit for the year then ended. These financial statements are the responsibility of the Laboratory's 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 Laboratory as at March 31, 2007 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

Deloitte & Touche LLP

Chartered Accountants
June 8, 2007

PUBLIC HEALTH LABORATORY
Statement of Operations and Deficit
Year ended March 31, 2007

	<u>2007</u>	<u>2006</u>
	\$	\$
REVENUE		
Government of Newfoundland and Labrador	3,526,754	3,295,017
EXPENDITURES		
Wages and benefits	1,584,016	1,505,209
Laboratory supplies	1,487,376	1,416,835
Professional fees	204,793	127,257
Operating supplies	131,879	115,527
Repairs and maintenance	73,735	64,463
Printing, stationery and office	58,583	51,297
Travel	34,376	9,780
Telephone	11,767	11,992
Minor equipment	10,828	8,287
	<u>3,597,353</u>	<u>3,310,647</u>
EXCESS OF EXPENDITURES OVER REVENUE		
BEFORE UNDERNOTED ITEMS:	(70,599)	(15,630)
Amortization of capital assets	(130,744)	(149,886)
Amortization of deferred capital contributions	47,208	47,208
Decrease (increase) in severance pay accrual	(1,031)	4,704
	<u>(155,166)</u>	<u>(113,604)</u>
EXCESS OF EXPENDITURES OVER REVENUE	(155,166)	(113,604)
DEFICIT, BEGINNING OF YEAR	(869,273)	(755,669)
DEFICIT, END OF YEAR	(1,024,439)	(869,273)


PUBLIC HEALTH LABORATORY

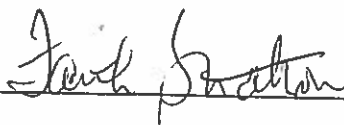
Statement of Financial Position

March 31, 2007

	<u>2007</u>	<u>2006</u>
	\$	\$
ASSETS		
CURRENT		
Cash	500	500
Receivables	43,689	40,000
	<u>44,189</u>	<u>40,500</u>
CAPITAL ASSETS (Note 3)	<u>89,378</u>	<u>214,334</u>
	<u>133,567</u>	<u>254,834</u>
LIABILITIES		
Current		
Payables and accruals	47,637	91,590
Payable to Eastern Regional Health Authority	211,255	223,147
Deferred revenue	118,673	-
Accrued vacation pay	251,287	234,039
	<u>628,852</u>	<u>548,776</u>
ACCRUED SEVERANCE PAY	<u>444,625</u>	<u>443,594</u>
DEFERRED CAPITAL CONTRIBUTIONS	<u>84,529</u>	<u>131,737</u>
	<u>1,158,006</u>	<u>1,124,107</u>
DEFICIT		
Deficit	<u>(1,024,439)</u>	<u>(869,273)</u>
	<u>133,567</u>	<u>254,834</u>

ON BEHALF OF THE BOARD:


Trustee


Trustee

PUBLIC HEALTH LABORATORY

Notes to Financial Statements

March 31, 2007

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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements have been prepared in accordance with Canadian generally accepted accounting principles, the more significant of which are as follows:

Basis of accounting

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

Revenue recognition

Revenues are recognized as earned and when collection is reasonably assured.

Capital assets

Capital assets are recorded at cost.

Amortization is recorded on the straight-line basis at the following rates:

Equipment	15%
Computer equipment	20%

Capital contributions

Capital contributions are recorded as deferred contributions and amortized to income on a straight-line basis using the same rates as amortization related to the capital assets purchased.

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. Severance is payable when the employee ceases employment with the Laboratory.

PUBLIC HEALTH LABORATORY

Notes to Financial Statements

March 31, 2007

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Pension costs

Employees of the Public Health Laboratory are covered by 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.

Use of estimates

The preparation of financial statements in conformity with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and, the disclosure of contingent assets and liabilities at the date of the financial statements, and reported amounts of revenue and expenses during the year. Actual results could differ from these estimates.

3. CAPITAL ASSETS

	2007		2006	
	Cost	Accumulated Amortization	Net Book Value	Net Book Value
	\$	\$	\$	\$
Equipment	1,538,869	1,449,491	89,378	120,504
Computer equipment	602,290	602,290	-	93,830
	<u>2,141,159</u>	<u>2,051,781</u>	<u>89,378</u>	<u>214,334</u>

During the current year Public Health Laboratory had capital purchases totalling \$5,789.

4. RELATED PARTY TRANSACTIONS

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

5. FINANCIAL INSTRUMENTS

The carrying value of the Laboratory's financial instruments included in current assets and current liabilities approximates fair value due to the relatively short term to maturity of these instruments.

6. STATEMENT OF CASH FLOWS

A statement of cash flows has not been prepared because it would not provide any additional useful information in understanding the cash flows during the year.