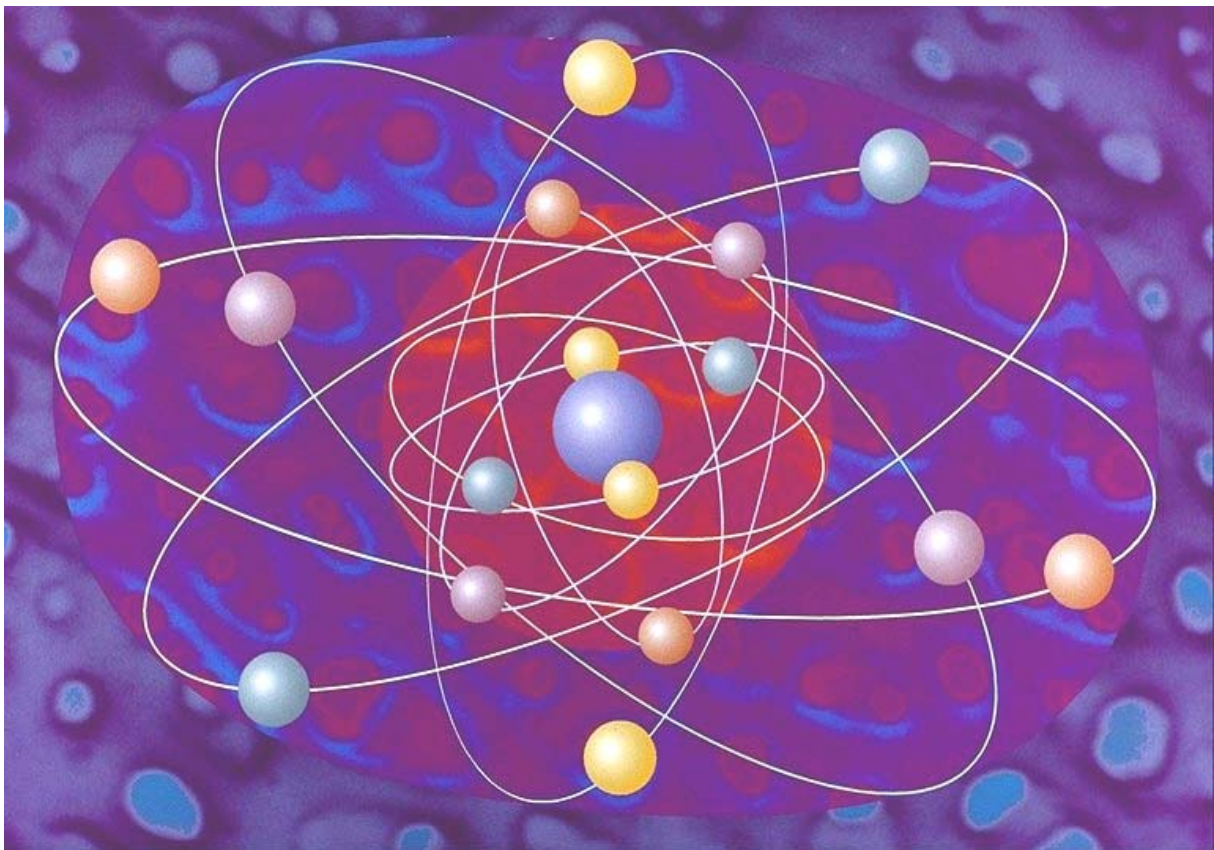


# SCIENCE AND TECHNOLOGY

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SCIENTIFIC ACTIVITIES OF THE  
GOVERNMENT OF ALBERTA  
2004-2005 AND 2005-2006 ESTIMATES  
SURVEY RESULTS



March 2006



## **2004-2005 SURVEY RESULTS**

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# **SCIENTIFIC ACTIVITIES OF THE GOVERNMENT OF ALBERTA**

**2004-2005 Actual  
2005-2006 Estimates**

### **A REPORT PREPARED BY**

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March 2006



## FOREWORD

This report presents a summary of the results of an annual survey on scientific activities of the Government of Alberta. Michèle Lanoue, under the supervision of Lloyd Lizotte of Statistics Canada and under the sponsorship and with the co-operation and assistance of the Department of Innovation and Science, conducted this survey in the summer of 2005.

The statistical data presented here provide a broad perspective of the Government of Alberta involvement in science and technology (S&T). The report contains indicators of science expenditures and personnel for various aspects such as:

- Department or agency, type of activity, sector of performance, source of funds and science type.

This report is made possible through the goodwill and efforts of officials of responding departments and agencies.

Please note that the Alberta Research Council is incorporated as a not-for-profit business under the Business Corporation Act. Alberta Research Council Inc. (ARC) is a wholly owned subsidiary of the Alberta Science and Research Authority (ASRA). Also note that ARC is no longer reported as a performing sector in the tables reported in this report. iCORE (Informatics Circle of Research Excellence) is also a not-for-profit business corporation which is owned by ASRA. These two organizations are reported under Innovation and Science as part of the ministry.

Research investments made by the Alberta Heritage Foundation for Medical Research (AHFMR) and the Alberta Heritage Foundation for Science and Engineering Research, operating under the name of the Alberta Ingenuity Fund, are also reported within the Innovation and Science research and development activities, as these bodies, while independent Foundations, report to the Government through the Minister of Innovation and Science.

Currently all provinces except Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick and the Territories are surveyed. In Québec, a survey of only research and development (R&D) statistics is conducted by the Institut de la statistique du Québec and shared with Statistics Canada. Detailed results of provincial surveys remain the property and responsibility of participating provinces. Reports for the provinces surveyed are available on request from the provincial Department or Ministry sponsoring the survey. A list of contacts is provided at the end of this report. Statistics Canada also makes available a summary working paper including a historical account of all scientific data available at the provincial government level in Science Statistics, Catalogue 88F0006XIE.

Surveys of the scientific activities of provincial governments serve several purposes. They provide an essential data base for analysis and the formulation of provincial science policy. They also provide data for the development of a national aggregate R&D series *Estimates of Canadian Research and Development Expenditures* (GERD). Statistics Canada in Science Statistics Catalogue No. 88-001 and Vol. 29, No. 8, publishes national aggregates for the current year. National aggregates are also needed to complete the international questionnaires for the *Organization for Economic Co-operation and Development* (OECD) and the *United Nations Educational, Scientific and Cultural Organization* (UNESCO).

Science surveys, like many other surveys, are based on respondents' interpretations of definitions and methods of calculation. Accounting records available rarely use a science-based classification. Recognizing the fact that the data are estimates, they are still a good representation of the current science expenditures and employment data for the province of Alberta.

We would like to express special appreciation to Ms. Lisa Bowes of Innovation and Science for her support and efforts in conducting this survey.



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Total expenditures:						
by activity	1	19	23	44	45	68
by department or agency	2	20	24	45	46	69
by performing sector	3	21	25	45	47	69
Research and development (R&D) expenditures:						
by performing sector	4	21	26	46	48	70
by department or agency	5	22	27	46	49	70
Personnel engaged in scientific activities, by activity and category	6	23	28	47	50	71
<b>2004-2005 scientific activities:</b>						
Total expenditures :						
by department or agency and source of funds	7	24	29	48	51	72
by activity and performing sector	8	25	30	49	52	72
by department or agency and performing sector	9	26	31	50	53	73
by department or agency and activity	10	27	32	51	54	73
Research and development (R&D) expenditures by Department or Agency and Performing Sector	11	28	33	52	55	74
Intramural Expenditures by Department or Agency and Type of Expenditure	12	29	34	53	56	74
Personnel Engaged in Scientific Activities by Department or Agency and Activity	13	30	35	54	57	75
Objectives of Expenditures:						
by Department or Agency	14	32	36	56	58	76
by Activity	15	34	37	58	59	77

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Statistical Tables	Total Sciences		Natural Sciences		Social Sciences and Humanities	
	Table	Page	Table	Page	Table	Page
<b>Estimates for 2005-2006:</b>						
Total Expenditures:						
by Activity and Performing Sector	16	34	38	58	60	78
by Department or Agency and Performing Sector	17	35	39	59	61	78
by Department or Agency and Activity	18	36	40	60	62	79
Research and Development (R&D) Expenditures by Department or Agency and Performing Sector	19	37	41	61	63	79
Personnel Engaged in Scientific Activities by Department or Agency and Activity	20	38	42	62	64	80
Objectives of Expenditures:						
by Department or Agency	21	40	43	64	65	82
by Activity	22	42	44	66	66	83
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**The following symbols are used in this report:**

- nil or zero
- amount too small to be expressed
- .. figures not available
- ... figures are not appropriate or not applicable
- <sup>e</sup> estimated figures
- <sup>r</sup> revised figures



## DEFINITIONS

This report covers those scientific and technological activities, which involve the generation, dissemination and application of new scientific and technological knowledge.

There are two different **science types** that are identified by this survey, the natural sciences and the social sciences and humanities.

**Natural sciences** consist of disciplines concerned with understanding, exploring, developing or utilizing the natural world. Included are the engineering, mathematical, environmental, life and physical sciences.

**Social sciences and humanities** include all disciplines involving the study of human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, business administration and commerce, communications, criminology, demography, economics, geography, history, languages, literature and linguistics, law, library science, philosophy, political science, psychology, religious studies, social work, sociology and urban and regional studies.

The central activity is **research and experimental development (R&D)**. In addition, there are a number of activities closely related to R&D and are referred to as **related scientific activities (RSA)**.

**R&D** is creative work undertaken on a systematic basis in order to increase the stock of scientific and technical knowledge as well as knowledge of humans, their culture and society; and the use of this knowledge to devise new applications. The central characteristic of R&D is an appreciable element of novelty and uncertainty. It requires the acquisition of knowledge and not just information. New knowledge involves the integration of newly acquired information into existing hypotheses, the formulation and testing of new hypotheses or the re-evaluation of existing observations.

**Related scientific activities** include education support, technical surveys, statistical surveys, information services, special services and studies, and museum services. Education support and museum services are largely self-explanatory.

- **Technical surveys** are activities directed towards the exploration and systematic description of the earth and its natural resources. The activities include gathering, processing, collating and analysing of data on natural phenomena except when part of a research project or a museum service. The preparation of maps and survey reports, their printing and cataloguing, are also included.
- **Statistical surveys** are activities directed towards the collecting, processing and disseminating of statistics on humankind, their economic and social activities. Included are the development of technical methodology, statistical analysis and vital statistics.
- **Information services** are activities directed to recording, classifying, translating, and disseminating scientific and technological information (**technology transfer**). As well as information resulting from R&D in the social sciences or required in support of such R&D. Included are the operations of scientific and technical libraries, specialized libraries and archives, the publication of scientific journals and bibliographies, and the organizing of scientific conferences. Grants for the publication of scholarly works are also included.

## DEFINITIONS continued

- **Special services and studies** in the natural sciences are activities directed towards the establishment of national and provincial standards for materials, devices, products and processes; the calibration of secondary standards; non-routine quality testing; feasibility studies and demonstration projects.

In the social sciences, special services and studies are systematic investigations carried out in order to provide information needed for planning or policy formulation, including feasibility studies, and demonstration projects.

Five (5)-performing **sectors** are identified:

- **Intramural** refers to units of the provincial government performing scientific activities with their own funds.
- **Business enterprise** consists largely of Canadian private corporations but also includes crown corporations with a commercial function (e.g. power utilities) and industrial research institutes not controlled by another institution. Consultants providing scientific and engineering services are also included.
- **Higher education** includes Canadian universities and affiliated institutes owned, administered or staffed by them (e.g., TR Labs or Canadian Light Source).
- **Hospitals and health organizations** are Canadian hospitals and health organizations, which are not part of university medical schools, as well as private non-profit organizations.
- **Other** includes recipients not covered elsewhere such as the federal government, municipal governments, individuals and foreign performers.

Expenditures are either current or capital. **Current expenditures** include costs of personnel, transportation and communications, information, professional and special services, rentals, purchased repair and upkeep, utilities, materials and supplies. **Capital expenditures** are incurred for the construction and acquisition of land, buildings, machinery and equipment. **Total expenditures** comprise current plus capital expenditures.

**Departmental personnel data** are requested by activity and category of employment in full-time equivalent (FTE). A person working entirely full-time on a scientific activity is counted as one full-time equivalent. Those working only part-time on scientific activities are considered as a fraction corresponding to their involvement. Both permanent and non-permanent employees are included.

**Objectives of expenditures** are requested by activity (R&D and RSA) and performer (intramural and extramural). The objectives listed are intended to cover the major areas of current economic, political and technological interest. Data are to be reported under the objective, which is primary to that expenditure. Generally, the objective selected should be consistent with the stated objectives of the reporting Department.

## HIGHLIGHTS

During the 2004-2005 fiscal year, Alberta government expenditures on scientific activities were \$362.6 million. This is 1.8% of the total budgetary expenditures of the government for that year. The scientific expenditures estimated for 2005-2006 are \$401.3 million, 1.9% of the total budgetary expenditures.

**TEXT TABLE I. Government of Alberta scientific indicators**

Year	GDP implicit price index (1997=100) <sup>1</sup> Canada	Government expenditures on scientific activities		Estimated government expenditures <sup>2</sup> Current dollars	Scientific activities as a percent of estimated expenditures
		Current dollars	1997 dollars		
		in millions of dollars		percent	
1996-1997	98.8	168.8	170.9	10,373.7	1.6
1997-1998	100.0	178.4	178.4	11,699.1	1.5
1998-1999	99.6	214.4	215.3	12,432.9	1.7
1999-2000	101.3	234.6	231.6	14,527.3	1.6
2000-2001 <sup>f</sup>	105.5	263.8	250.3	16,174.5	1.6
2001-2002	106.7	317.7	297.8	17,982.8	1.8
2002-2003	107.8	333.4	309.3	17,146.8	1.9
2003-2004 <sup>f</sup>	111.3	313.5	281.9	19,200.1	1.6
2004-2005 <sup>f</sup>	114.7	362.6	..	19,800.8	1.8
2005-2006 <sup>e</sup>	..	401.3	..	21,607.0	1.9

1. Source: CANSIM II - Table 384-0036 - Canada

2. Source: 2005-2006 Government and lottery fund estimates – Alberta

**Alberta provincial government activities**

In 2004-2005 the Government of Alberta's total scientific expenditures recovered from the small decrease in 2003-2004 with an increase of 15.6%, as well an increase of 10.7% has been estimated for 2005-2006.

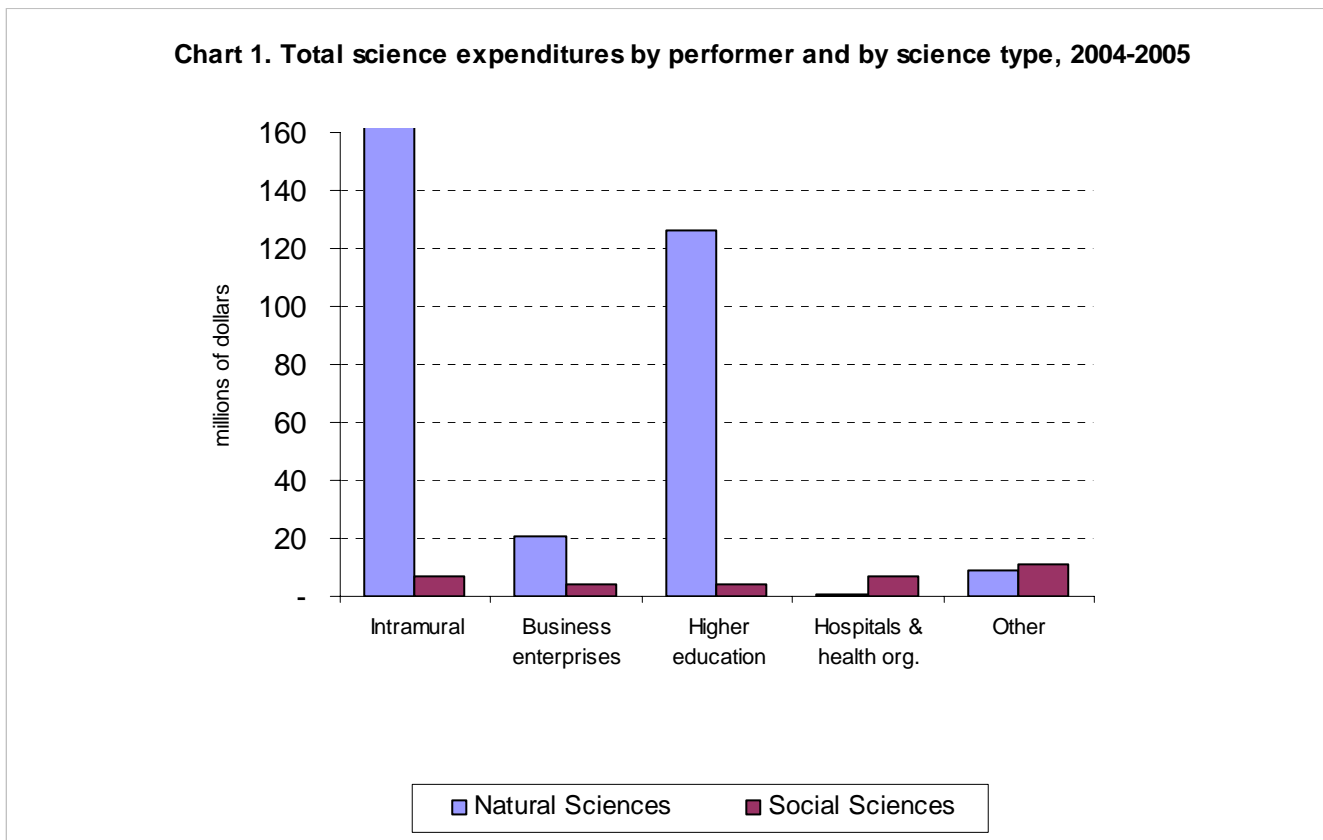
**TEXT TABLE II. Government of Alberta scientific expenditures, by activity and by department or agency, 2004-2005**

Department or agency	Natural sciences			Social sciences and humanities		
	Research and development	Related scientific activities	Total	Research and development	Related scientific activities	Total
in millions of dollars						
Aboriginal Affairs and Northern Development	...	...	...	...	0.1	<b>0.1</b>
Advanced Education	...	...	...	...	0.7	<b>0.7</b>
Agriculture, Food and Rural Development	11.8	16.1	<b>27.9</b>	...	...	...
Children's Services	...	...	...	1.3	0.7	<b>2.0</b>
Community Development	-	2.6	<b>2.6</b>	...	0.5	<b>0.5</b>
Economic Development	...	...	...	...	1.1	<b>1.1</b>
Education	...	...	...	...	0.5	<b>0.5</b>
Energy	...	...	...	...	0.2	<b>0.2</b>
Environment	0.2	13.1	<b>13.3</b>	...	...	...
Finance	...	...	...	...	0.6	<b>0.6</b>
Gaming	...	...	...	1.6	...	<b>1.6</b>
Health and Wellness	10.1	2.7	<b>12.8</b>	8.5	11.2	<b>19.7</b>
Human Resources and Employment	...	...	...	...	2.0	<b>2.0</b>
Infrastructure and Transportation	17.7	10.5	<b>28.2</b>	...	...	...
Innovation and Science:						
Alberta Science and Research Authority	40.6	-	<b>40.6</b>	...	1.4	<b>1.4</b>
Alberta Agricultural Research Institute	7.5	0.5	<b>8.0</b>	...	...	...
Alberta Energy Research Institute	13.2	0.1	<b>13.3</b>	...	...	...
Alberta Forestry Research Institute	1.3	-	<b>1.3</b>	...	...	...
Alberta Research Council Inc.	72.2	9.5	<b>81.7</b>	...	...	...
iCORE (Informatics Circle of Research Excellence)	10.2	-	<b>10.2</b>	...	...	...
Alberta Heritage Foundation for Medical Research	48.9	-	<b>48.9</b>	...	...	...
Alberta Ingenuity Fund	16.7	-	<b>16.7</b>	...	...	...
<i>Sub total Innovation and Science</i>	<i>210.6</i>	<i>10.1</i>	<i>220.7</i>	...	...	...
Justice	...	...	...	...	1.4	<b>1.4</b>
Seniors	...	...	...	0.1	0.5	<b>0.6</b>
Solicitor General	...	...	...	...	0.2	<b>0.2</b>
Sustainable Resource Development	1.5	23.1	<b>24.6</b>	...	...	...
<b>Total</b>	<b>251.9</b>	<b>78.1</b>	<b>330.0</b>	<b>11.5</b>	<b>21.1</b>	<b>32.6</b>

In 2004-2005, \$330.0 million (91%) of the government's scientific activities were spent in the natural sciences. The Ministry of Innovation and Science (\$220.7 million) was the largest supporter of natural science activities. Infrastructure and Transportation (\$28.2 million) Agriculture, Food and Rural Development (\$27.9 million), Sustainable Resource Development (\$24.6 million), Environment (\$13.3 million) and Health and Wellness (\$12.8 million) are also significant supporters of natural science activities in Alberta.

Seventy-six percent (\$251.9 million) of natural science expenditures were spent on research and development. The major supporters of natural science R&D under Innovation and Science are; the Alberta Research Council Inc. (\$72.2 million), the Alberta Heritage Foundation for Medical Research (\$48.9 million), the Alberta Science and Research Authority (\$40.6 million).

Social sciences and humanities activities accounted for 9% (\$32.6 million) of the total 2004-2005 government science expenditures. The departments of Health and Wellness (\$19.7 million) and Children's Services (\$2 million) are the major supporters of social science activities.



Note: Intramural expenditures identified also include industry funding research conducted on contract basis by Alberta Research Council.

**TEXT TABLE III. Government of Alberta scientific expenditures, by activity and performer, 2004-2005**

Activity	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in millions of dollars						
<b>Current expenditures:</b>						
Research and development	80.0	8.8	127.1	6.7	7.1	<b>229.7</b>
Related scientific activities	62.4	16.8	3.0	0.5	12.2	<b>94.9</b>
<i>Sub-total</i>	<i>142.4</i>	<i>25.6</i>	<i>130.1</i>	<i>7.2</i>	<i>19.3</i>	<i>324.6</i>
<b>Administration of extramural programs:</b>						
Research and development	12.4	...	...	...	...	<b>12.4</b>
Related scientific activities	4.0	...	...	...	...	<b>4.0</b>
<i>Sub-total</i>	<i>16.4</i>	...	...	...	...	<i>16.4</i>
<b>Capital expenditures:</b>						
Research and development	21.3	...	...	...	...	<b>21.3</b>
Related scientific activities	0.3	...	...	...	...	<b>0.3</b>
<i>Sub-total</i>	<i>21.6</i>	...	...	...	...	<i>21.6</i>
<b>Total</b>	<b>180.4</b>	<b>25.6</b>	<b>130.1</b>	<b>7.2</b>	<b>19.3</b>	<b>362.6</b>

The largest recipient of provincial expenditures was the higher education sector receiving \$130.1 million, an increase of 8.8%. Also the business enterprise sector received \$25.6 million.

**TEXT TABLE IV. Government of Alberta scientific expenditures, by performer and department or agency, 2004-2005**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in millions of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	0.1	<b>0.1</b>
Advanced Education	0.7	-	-	-	--	<b>0.7</b>
Agriculture, Food and Rural Development	27.9	-	-	-	-	<b>27.9</b>
Children's Services	-	1.7	--	--	0.2	<b>2.0</b>
Community Development	3.0	0.1	-	-	-	<b>3.1</b>
Economic Development	0.4	0.6	-	-	--	<b>1.1</b>
Education	0.5	-	-	-	-	<b>0.5</b>
Energy	-	0.2	-	-	-	<b>0.2</b>
Environment	10.7	1.9	0.3	-	0.4	<b>13.3</b>
Finance	0.5	--	-	-	-	<b>0.6</b>
Gaming	-	-	1.5	-	--	<b>1.6</b>
Health and Wellness	2.4	-	11.7	7.1	11.2	<b>32.5</b>
Human Resources and Employment	0.8	1.2	-	-	-	<b>2.0</b>
Infrastructure and Transportation	20.7	7.1	-	-	0.4	<b>28.2</b>
Innovation and Science:						
Alberta Science and Research Authority	0.8	-	37.2	-	4.0	<b>42.0</b>
Alberta Agricultural Research Institute	0.7	0.5	5.5	-	1.3	<b>8.0</b>
Alberta Energy Research Institute	1.5	4.8	6.8	-	0.3	<b>13.3</b>
Alberta Forestry Research Institute	0.3	-	1.0	-	-	<b>1.3</b>
Alberta Research Council Inc.	81.7	-	-	-	-	<b>81.7</b>
iCORE (Informatics Circle of Research Excellence)	1.2	-	9.0	-	-	<b>10.2</b>
Alberta Heritage Foundation for Medical Research	5.8	-	43.1	-	-	<b>48.9</b>
Alberta Ingenuity Fund	1.8	1.5	13.4	-	-	<b>16.7</b>
<i>Sub-total Innovation and Science</i>	<i>93.8</i>	<i>6.8</i>	<i>115.9</i>	-	<i>5.6</i>	<i>222.1</i>
Justice	1.1	-	0.3	-	-	<b>1.4</b>
Seniors	--	0.5	--	--	--	<b>0.6</b>
Solicitor General	0.2	-	-	-	-	<b>0.2</b>
Sustainable Resource Development	17.8	5.3	0.1	-	1.3	<b>24.6</b>
<b>Total</b>	<b>180.4</b>	<b>25.6</b>	<b>130.1</b>	<b>7.2</b>	<b>19.3</b>	<b>362.6</b>

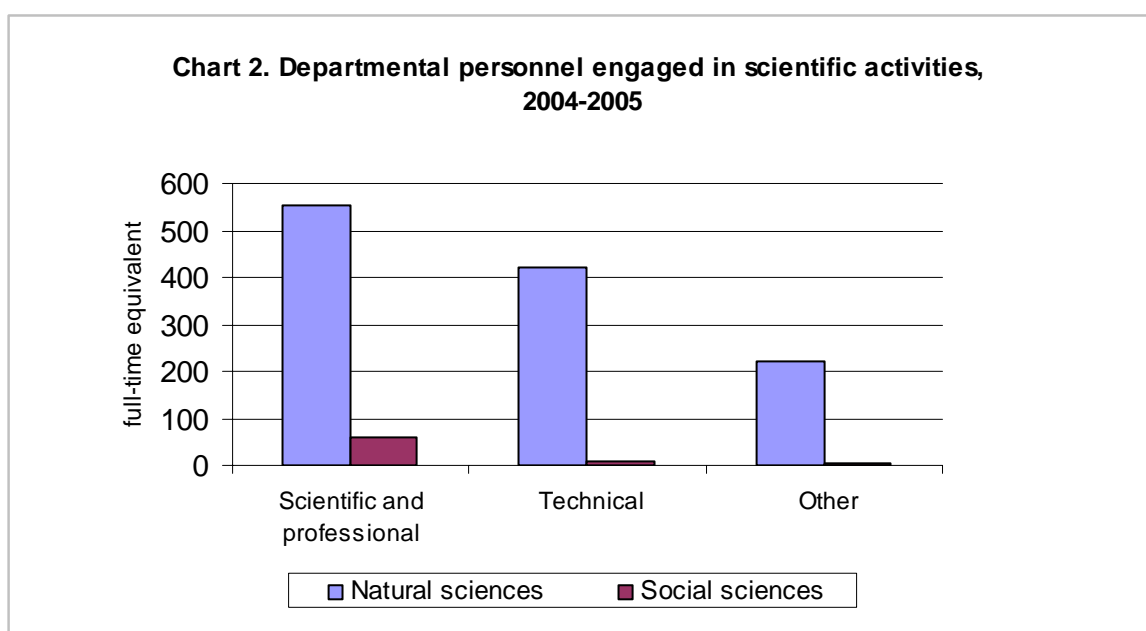
In 2004-2005, the Alberta Science and Research Authority and the Alberta Heritage Foundation for Medical Research, were the largest funders of scientific activities transferring \$80.3 million of the \$130.1 million to the Higher Education sector.

**TEXT TABLE V. Government of Alberta personnel engaged in scientific activities, by science type, activity and category, 2004-2005**

Science type and activity	Scientific and professional	Technical	Other	Total
		full-time equivalent		
<b>Natural sciences:</b>				
Research and development	202	235	171	608
Related scientific activities	309	170	10	489
Administration of extramural programs	44	16	39	99
<i>Sub-total</i>	555	421	220	1,196
<b>Social sciences:</b>				
Research and development	0	0	0	0
Related scientific activities	45	7	4	56
Administration of extramural programs	16	0	0	16
<i>Sub-total</i>	61	7	4	72
<b>All sciences:</b>				
Research and development	202	235	171	608
Related scientific activities	354	177	14	545
Administration of extramural programs	60	16	39	115
<i>Sub-total</i>	616	428	224	1,268
<b>Total</b>	<b>616</b>	<b>428</b>	<b>224</b>	<b>1,268</b>

Of the total Alberta government employees, 1,268 full-time equivalents were devoted to scientific activities in 2004-2005. Ninety-four percent of the full-time equivalents in scientific activities were in the natural sciences. When considering both sciences, the scientific and professional category accounted for 49%, technical personnel constituted 34% and other support staff the remaining 17%.

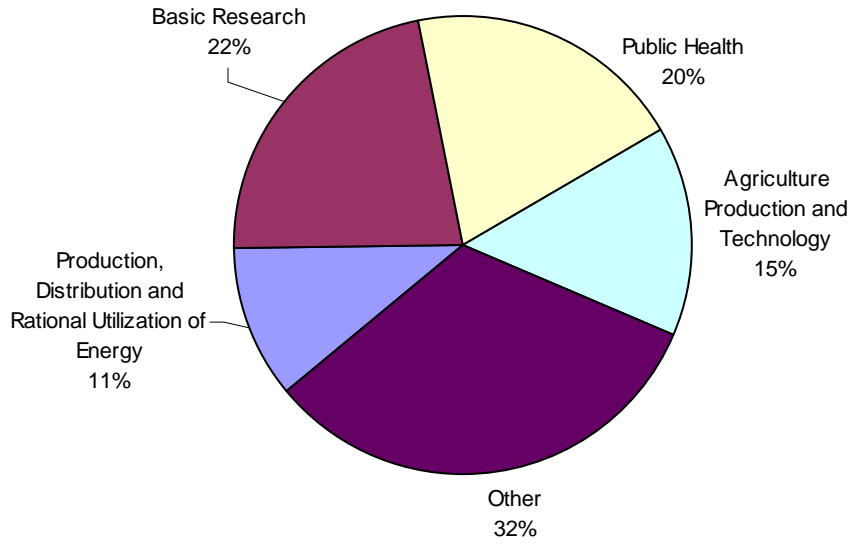




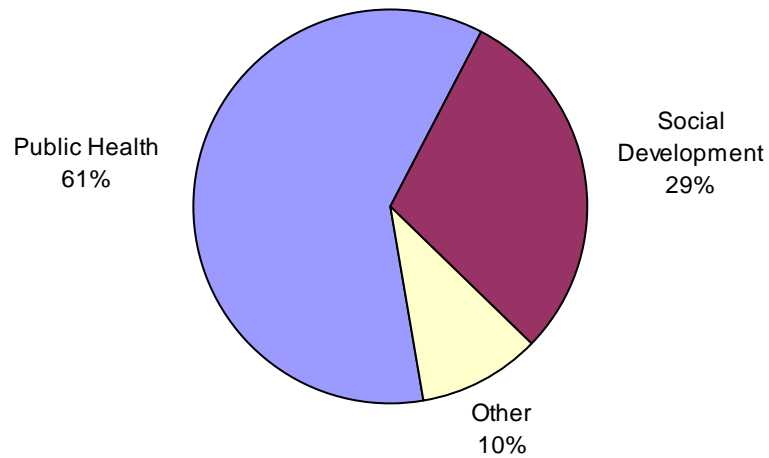
**TEXT TABLE VI. Objectives of the government of Alberta scientific expenditures by activity, 2004-2005**

Objective	R&D expenditures		Related scientific activities	
	in millions of dollars	%	in millions of dollars	%
Exploration and utilization of the earth	-	-	-	-
Infrastructure and general planning of land use				
Transport	1.0	--	8.7	9
Telecommunication	-	-	-	-
Other	16.8	6	14.8	15
Pollution and protection of the environment	8.7	3	25.9	26
Public health	69.3	26	16.0	16
Production, distribution and rational				
Utilization of energy	33.3	13	2.9	3
Agricultural production and technology	31.8	12	16.5	17
Fishing	-	-	0.2	--
Forestry	9.6	4	1.1	1
Industrial production and technology	17.4	7	0.8	1
Social development	3.0	1	9.4	10
Exploration and exploitation of space	-	-	-	-
Basic research	72.5	28	2.4	2
Other civil research	-	-	0.4	--
<b>Total</b>	<b>263.3</b>	<b>100</b>	<b>99.3</b>	<b>100</b>

**Chart 3. Major objectives of natural science activities, 2004-2005**



**Major objectives of social science activities, 2004- 2005**



# **STATISTICAL TABLES**

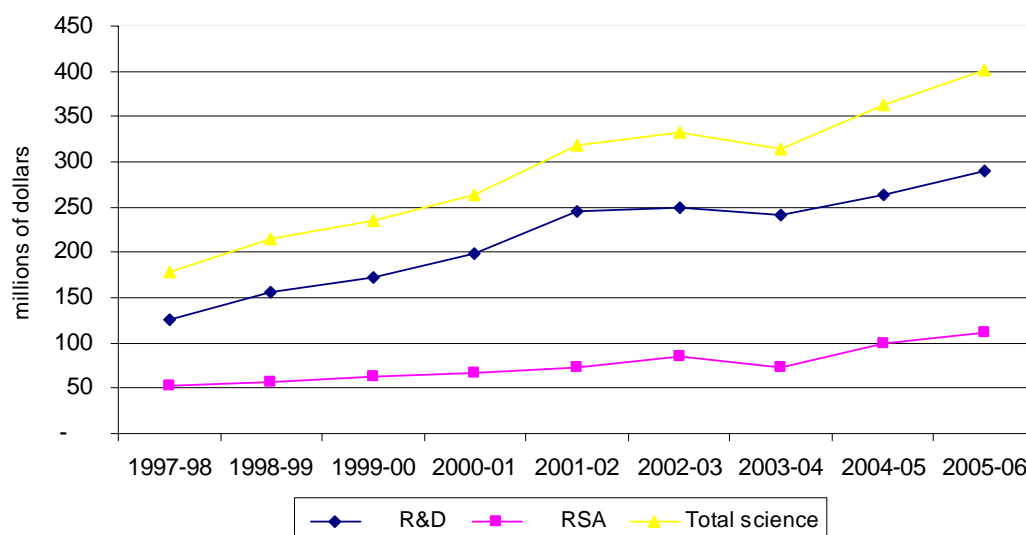


## **TOTAL SCIENCES**



**TABLE 1. Total expenditures by activity, 1997-98 to 2005-2006 estimates**

Activity	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>r</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
<b>Research and development (R&amp;D)</b>									
Current expenditures:									
In-house R&D	12,004	13,584	20,126	21,230	100,548	52,871	54,416	47,663	48,966
R&D contracts	9,019	5,461	3,866	7,596	5,270	50,717	38,713	33,430	46,965
R&D grants and contributions	98,542	130,091	143,055	160,979	125,149	126,957	127,164	144,944	143,744
Research fellowships	-	-	-	490	1,551	2,153	5,257	3,555	4,186
Admin of extramural R&D programs	6,036	7,004	5,811	7,408	10,583	13,674	10,361	12,446	14,644
<i>Sub-total current R&amp;D</i>	<i>125,601</i>	<i>156,140</i>	<i>172,858</i>	<i>197,703</i>	<i>243,101</i>	<i>246,372</i>	<i>235,911</i>	<i>242,038</i>	<i>258,505</i>
Capital expenditures	519	925	40	53	2,194	2,413	5,496	21,292	31,843
<b>Total R&amp;D</b>	<b>126,120</b>	<b>157,065</b>	<b>172,898</b>	<b>197,756</b>	<b>245,295</b>	<b>248,785</b>	<b>241,407</b>	<b>263,330</b>	<b>290,348</b>
<b>Related scientific activities (RSA)</b>									
Current expenditures	50,356	55,978	59,543	64,078	70,606	82,069	70,607	94,965	103,383
Admin of extramural RSA programs	1,293	1,119	2,001	1,755	1,562	1,777	1,393	3,951	3,708
<i>Sub-total current RSA</i>	<i>51,649</i>	<i>57,097</i>	<i>61,544</i>	<i>65,833</i>	<i>72,168</i>	<i>83,846</i>	<i>72,000</i>	<i>98,916</i>	<i>107,091</i>
Capital expenditures	619	255	150	205	281	790	139	347	3,845
<b>Total RSA</b>	<b>52,268</b>	<b>57,352</b>	<b>61,694</b>	<b>66,038</b>	<b>72,449</b>	<b>84,636</b>	<b>72,139</b>	<b>99,263</b>	<b>110,936</b>
<b>Total</b>	<b>178,388</b>	<b>214,417</b>	<b>234,592</b>	<b>263,794</b>	<b>317,744</b>	<b>333,421</b>	<b>313,546</b>	<b>362,593</b>	<b>401,284</b>

**Chart 4. Total science expenditures by activity, 1997-98 to 2005-06 estimates**


**TABLE 2. Total expenditures by department or agency, 1997-98 to 2005-2006 estimates**

Department or agency	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
	in thousands of dollars								
Aboriginal Affairs and Northern Development	...	...	...	...	157	146	92	126	100
Advanced Education	...	...	...	...	...	...	...	657	650
Advanced Education and Career Development	10,400	18,500	...	...	...	...	...	...	...
Agriculture, Food and Rural Development <sup>1</sup>	36,845	40,817	33,134	33,270	32,373	25,958	24,573	27,879	27,879
Children's Services	...	...	...	253	265	2,862	2,673	1,979	2,445
Community Development	7,900	7,900	7,900	3,202	3,845	3,224	3,114	3,105	2,965
Economic Development	8,488	4,200	-	234	298	696	663	1,075	1,429
Education	153	161	-	...	...	...	...	493	396
Energy	10,887	16,708	-	-	50	302	...	227	183
Environment	...	...	...	32,705	12,057	9,367	11,743	13,261	20,526
Environmental Protection	24,967	24,658	25,000	...	...	...	...	...	...
Family and Social Services	231	243	...	...	...	...	...	...	...
Finance	...	...	...	...	...	490	535	570	490
Gaming	...	...	...	1,500	1,500	1,500	1,734	1,560	1,560
Health and Wellness <sup>2</sup>	11,002	10,320	15,824	18,547	30,123	51,492	24,267	32,466	40,821
Human Resources and Employment	...	...	...	2,318	1,916	1,452	1,927	2,011	1,805
Infrastructure	...	5,996	9,648	12,529	508	543	3,424	...	...
Infrastructure and Transportation	...	...	...	...	...	...	...	28,217	40,974
Innovation and Science									
Alberta Science and Research Authority	...	...	81,030	76,093	41,749	42,656	40,567	42,004	32,387
Alberta Agricultural Research Institute <sup>1</sup>	...	...	7,383	8,780	6,725	6,826	8,328	8,049	8,183
Alberta Energy Research Institute	...	...	7,649	7,258	7,590	6,705	10,261	13,324	17,007
Alberta Forestry Research Institute	...	...	...	1,746	2,112	1,750	1,955	1,295	3,374
Alberta Research Council Inc <sup>3</sup>	...	...	...	...	82,706	79,024	79,304	81,692	88,250
iCORE Inc. (Informatics Circle of Research Excellence)	...	...	855	10,004	5,863	10,079	9,737	10,200	12,500
Alberta Heritage Foundation for Medical Research	34,296	40,708	45,409	52,806	60,802	54,494	47,604	48,875	52,000
Alberta Ingenuity Fund	...	...	...	...	276	6,777	10,847	16,686	22,335
<i>Sub total Innovation and Science</i>	<i>34,296</i>	<i>40,708</i>	<i>142,326</i>	<i>156,687</i>	<i>207,823</i>	<i>208,311</i>	<i>208,603</i>	<i>222,125</i>	<i>236,036</i>
Justice	779	760	760	449	328	356	545	1,423	528
Learning	...	...	...	2,100	2,111	679	1,011	...	...
Science, Research and Information Technology <sup>4</sup>	28,364	43,446	...	...	...	...	...	...	...
Seniors	...	...	...	...	...	17	43	613	438
Solicitor General	...	...	...	...	20	135	202	202	147
Sustainable Resource Development	...	...	...	...	14,682	13,771	17,491	24,604	21,912
Transportation	4,076	-	-	-	9,688	12,120	10,906	...	...
<b>Total</b>	<b>178,388</b>	<b>214,417</b>	<b>234,592</b>	<b>263,794</b>	<b>317,744</b>	<b>333,421</b>	<b>313,546</b>	<b>362,593</b>	<b>401,284</b>

1. Alberta Agricultural Research Institute expenditures from 1995 to 1998 reported through the Department of Agriculture, Food and Rural Development.
2. The research investments by AHW, particularly in the area of Related Scientific Activity, have decreased in 2004-05 due to the completion of funding programs such as the Medical Services Delivery Innovation Fund and the Health Innovation Fund.
3. As of 2001, the Alberta Research Council Inc (ARC) is included as an agency under Innovation and Science. Previously ARC was included in the provincial research organizations survey. Please note ARC includes both annual funding by the government of Alberta and other sources.
4. Formed the foundation of the Ministry of Innovation and Science that was created in 1999 to consolidate the government's scientific research, development and application activities.

**TABLE 3. Total expenditures by performing sector, 1997-98 to 2005-2006 estimates**

Performing sector	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
Intramural	56,983	60,793	68,026	71,761	152,618	145,395	147,983	180,437	199,070
Business enterprises	17,289	28,177	17,397	25,353	35,294	33,264	29,011	25,583	41,460
Higher education	57,944	74,028	92,991	103,957	105,304	108,807	119,652	130,084	130,934
Hospitals and health organizations	4,936	3,626	8,130	7,880	9,635	8,033	2,751	7,208	6,200
Alberta Research Council <sup>1</sup>	29,918	32,857	36,367	33,980	...	...	...	...	...
Other	11,318	14,936	11,681	20,863	14,893	37,922	14,149	19,281	23,620
<b>Total</b>	<b>178,388</b>	<b>214,417</b>	<b>234,592</b>	<b>263,794</b>	<b>317,744</b>	<b>333,421</b>	<b>313,546</b>	<b>362,593</b>	<b>401,284</b>

1. Includes only annual funding by the Government of Alberta - other funds are not included. As of 2001, the Alberta Research Council (ARC) is included as an agency under Innovation and Science and industry funded scientific activities performed by ARC are included.

**TABLE 4. Total expenditures on R&D, by performing sector, 1997-98 to 2005-2006 estimates**

Performing sector	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
Intramural	18,529	21,513	26,127	28,937	113,522	107,970	102,567	113,700	131,021
Business enterprises	10,705	19,777	5,702	9,041	12,373	18,442	11,084	8,804	20,363
Higher education	55,654	69,172	91,619	103,587	101,694	106,056	117,916	127,058	123,168
Hospitals and health organizations	3,416	2,800	6,800	6,441	7,772	7,800	1,796	6,658	6,200
Alberta Research Council <sup>1</sup>	29,105	31,979	35,667	33,620	...	...	...	...	...
Other	8,711	11,824	6,983	16,130	9,934	8,517	8,044	7,110	9,596
<b>Total</b>	<b>126,120</b>	<b>157,065</b>	<b>172,898</b>	<b>197,756</b>	<b>245,295</b>	<b>248,785</b>	<b>241,407</b>	<b>263,330</b>	<b>290,348</b>

1. From 1995 to 2000 includes only annual funding by the Government of Alberta - other funds are not included. As of 2001, the Alberta Research Council is included as an agency under Innovation and Science and industry funded scientific activities performed by ARC are included.

**TABLE 5. Total expenditures on R&D, by department or agency, 1997-98 to 2005-2006 estimates**

Department or agency	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
	in thousands of dollars								
Aboriginal Affairs and Northern Development	...	...	...	...	157	31	-	-	-
Advanced Education	...	...	...	...	...	...	...	-	-
Advanced Education and Career Development	10,400	18,500	...	...	...	...	...	...	...
Agriculture, Food and Rural Development <sup>1</sup>	25,626	28,041	19,855	20,289	19,392	14,503	13,549	11,818	11,818
Children's Services	...	...	...	-	-	2,735	2,200	1,295	2,000
Community Development	-	-	-	287	-	-	-	-	-
Economic Development	7,801	3,600	-	-	-	-	-	-	-
Education	-	-	...	...	...	...	...	-	-
Energy	10,330	16,387	-	-	50	-	...	...	...
Environment	...	...	...	5,014	1,201	1,173	639	192	93
Environmental Protection	4,247	4,511	3,290	...	...	...	...	...	...
Family and Social Services	-	-	...	...	...	...	...	...	...
Finance	...	...	...	...	...	...	...	...	...
Gaming	...	...	...	1,500	1,500	1,500	1,549	1,560	1,560
Health and Wellness	5,850	5,850	10,250	13,115	13,378	17,451	14,927	18,519	20,511
Human Resources and Employment	...	...	...	-	-	-	-	-	-
Infrastructure	...	1,281	1,541	1,604	13	-	2,839	...	...
Infrastructure and Transportation								17,745	26,546
Innovation and Science									
Alberta Science and Research Authority	...	...	77,421	76,093	41,749	42,566	40,077	40,564	31,492
Alberta Agricultural Research Institute <sup>1</sup>	...	...	6,628	8,040	5,985	5,921	7,380	7,538	7,672
Alberta Energy Research Institute	...	...	7,649	7,258	7,487	6,679	9,862	13,188	16,903
Alberta Forestry Research Institute	...	...	...	1,746	2,112	1,750	1,955	1,295	3,374
Alberta Research Council Inc <sup>2</sup>	...	...	...	...	82,706	79,024	73,974	72,180	79,690
iCORE Inc. (Informatics Circle of Research Excellence)	...	...	855	10,004	5,863	10,079	9,737	10,200	12,500
Alberta Heritage Foundation for Medical Research	34,296	40,708	45,409	52,806	60,802	54,494	47,604	48,875	52,000
Alberta Ingenuity Fund	...	...	...	...	276	6,777	10,847	16,686	22,335
<i>Sub total Innovation and Science</i>	<i>34,296</i>	<i>40,708</i>	<i>137,962</i>	<i>155,947</i>	<i>206,980</i>	<i>207,290</i>	<i>201,436</i>	<i>210,526</i>	<i>225,966</i>
Justice	...	...	...	...	...	...	...	...	...
Learning	...	...	...	...	...	...	...	...	...
Science, Research and Information Technology <sup>3</sup>	26,848	38,187	...	...	...	...	...	...	...
Seniors	...	...	...	...	...	...	...	133	12
Solicitor General	...	...	...	...	...	...	...	...	...
Sustainable Resource Development	...	...	...	...	1,232	1,531	1,734	1,542	1,842
Transportation	722	...	...	...	1,392	2,571	2,534	...	...
<b>Total</b>	<b>126,120</b>	<b>157,065</b>	<b>172,898</b>	<b>197,756</b>	<b>245,295</b>	<b>248,785</b>	<b>241,407</b>	<b>263,330</b>	<b>290,348</b>

1. Alberta Agricultural Research Institute expenditures from 1995 to 1998 reported through the Department of Agriculture, Food and Rural Development.
2. As of 2001, the Alberta Research Council Inc (ARC) is included as an agency under Innovation and Science. Previously ARC was included in the provincial research organizations survey. Please note ARC includes both annual funding by the government of Alberta and other sources.
3. Formed the foundation of the Ministry of Innovation and Science that was created in 1999 to consolidate the government's scientific research, development and application activities.



**TABLE 6. Personnel engaged in scientific activities, by activity and category, 1997-98 to 2005-2006 estimates**

Activity and category	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
	full-time equivalent								
<b>Research and development (R&amp;D):</b>									
Scientific and professional	125	131	95	102	283	191	206	202	222
Technical	94	98	133	136	291	262	193	235	274
Other	2	1	1	1	187	179	165	171	176
<i>Sub-total</i>	221	230	229	239	762	632	564	608	672
<b>Administration of extramural R&amp;D programs:</b>									
Scientific and professional	27	36	25	25	36	49	35	36	44
Technical	8	4	4	10	9	16	12	10	14
Other	28	29	30	26	32	43	45	38	39
<i>Sub-total</i>	63	69	58	61	77	108	92	84	97
<b>Total R&amp;D personnel</b>	<b>284</b>	<b>299</b>	<b>287</b>	<b>300</b>	<b>839</b>	<b>740</b>	<b>656</b>	<b>692</b>	<b>769</b>
<b>Related scientific activities intramural (RSA):</b>									
Scientific and professional	232	249	239	232	200	257	286	354	353
Technical	174	170	200	202	182	156	183	177	167
Other	60	69	42	39	28	17	36	14	22
<i>Sub-total</i>	466	488	481	473	410	430	505	545	542
<b>Administration of extramural RSA programs:</b>									
Scientific and professional	6	8	14	25	78	26	26	24	24
Technical	8	15	10	12	16	7	5	6	6
Other	4	2	26	5	2	2	6	1	1
<i>Sub-total</i>	18	25	50	42	96	35	37	31	31
<b>Total RSA personnel</b>	<b>484</b>	<b>513</b>	<b>531</b>	<b>515</b>	<b>506</b>	<b>465</b>	<b>542</b>	<b>576</b>	<b>573</b>
<b>Total science activities</b>									
Scientific and professional	390	424	373	384	597	523	553	616	643
Technical	284	287	347	360	498	441	393	428	461
Other	94	101	99	71	249	241	252	224	238
<b>Total scientific personnel</b>	<b>768</b>	<b>812</b>	<b>818</b>	<b>815</b>	<b>1,345</b>	<b>1,205</b>	<b>1,198</b>	<b>1,268</b>	<b>1,342</b>

**TABLE 7. Total expenditures by department or agency and source of funds, 2004-2005**

Department or agency	Departmental budget	Transfers from other departments	Transfers from federal governments	From trust funds	From business enterprises	From other sources	Total
in thousands of dollars							
Aboriginal Affairs and Northern Development	126	-	-	-	-	-	126
Advanced Education	657	-	-	-	-	-	657
Agriculture, Food and Rural Development	26,965	914	-	-	-	-	27,879
Children's Services	1,979	-	-	-	-	-	1,979
Community Development	3,105	-	-	-	-	-	3,105
Economic Development	917	158	-	-	-	-	1,075
Education	493	-	-	-	-	-	493
Energy	227	-	-	-	-	-	227
Environment	13,261	-	-	-	-	-	13,261
Finance	495	75	-	-	-	-	570
Gaming	1,560	-	-	-	-	-	1,560
Health and Wellness	32,466	-	-	-	-	-	32,466
Human Resources and Employment	1,325	75	611	-	-	-	2,011
Infrastructure and Transportation	28,138	25	44	-	-	10	28,217
Innovation and Science:							
Alberta Science and Research Authority	42,004	-	-	-	-	-	42,004
Alberta Agricultural Research Institute	8,049	-	-	-	-	-	8,049
Alberta Energy Research Institute	13,324	-	-	-	-	-	13,324
Alberta Forestry Research Institute	1,295	-	-	-	-	-	1,295
Alberta Research Council Inc.	27,277	19,268	2,469	-	25,885	6,793	81,692
iCORE Inc. (Informatics Circle of Research Excellence)	10,200	-	-	-	-	-	10,200
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	48,875	48,875
Alberta Ingenuity Fund	-	-	-	-	-	16,686	16,686
<i>Sub-total Innovation and Science</i>	<i>102,149</i>	<i>19,268</i>	<i>2,469</i>	-	<i>25,885</i>	<i>72,354</i>	<i>222,125</i>
Justice	1,286	-	137	-	-	-	1,423
Seniors	613	-	-	-	-	-	613
Solicitor General	127	-	75	-	-	-	202
Sustainable Resource Development	23,163	-	120	-	-	1,321	24,604
<b>Total</b>	<b>239,052</b>	<b>20,515</b>	<b>3,456</b>	-	<b>25,885</b>	<b>73,685</b>	<b>362,593</b>

**TABLE 8. Total expenditures by activity and performing sector, 2004-2005**

Activity	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
<b>Research and development (R&amp;D)</b>						
Current expenditures:						
In-house R&D	47,663	...	...	...	...	<b>47,663</b>
R&D contracts	32,299	843	121	-	167	<b>33,430</b>
R&D grants and contributions	...	7,961	123,382	6,658	6,943	<b>144,944</b>
Research fellowships	-	-	3,555	-	-	<b>3,555</b>
Admin of extramural R&D programs	12,446	...	...	...	...	<b>12,446</b>
<i>Sub-total current R&amp;D</i>	<i>92,408</i>	<i>8,804</i>	<i>127,058</i>	<i>6,658</i>	<i>7,110</i>	<i>242,038</i>
Capital expenditures	21,292	...	...	...	...	<b>21,292</b>
<b>Total R&amp;D</b>	<b>113,700</b>	<b>8,804</b>	<b>127,058</b>	<b>6,658</b>	<b>7,110</b>	<b>263,330</b>
<b>Related scientific activities (RSA)</b>						
Current expenditures	62,439	16,779	3,026	550	12,171	<b>94,965</b>
Admin of extramural RSA programs	3,951	...	...	...	...	<b>3,951</b>
<i>Sub-total current RSA</i>	<i>66,390</i>	<i>16,779</i>	<i>3,026</i>	<i>550</i>	<i>12,171</i>	<i>98,916</i>
Capital expenditures	347	...	...	...	...	<b>347</b>
<b>Total RSA</b>	<b>66,737</b>	<b>16,779</b>	<b>3,026</b>	<b>550</b>	<b>12,171</b>	<b>99,263</b>
<b>Total</b>	<b>180,437</b>	<b>25,583</b>	<b>130,084</b>	<b>7,208</b>	<b>19,281</b>	<b>362,593</b>

**TABLE 9. Total expenditures by department or agency and performing sector, 2004-2005**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	126	<b>126</b>
Advanced Education	650	-	-	-	7	<b>657</b>
Agriculture, Food and Rural Development	27,879	-	-	-	-	<b>27,879</b>
Children's Services	-	1,712	62	25	180	<b>1,979</b>
Community Development	2,955	150	-	-	-	<b>3,105</b>
Economic Development	375	615	-	-	85	<b>1,075</b>
Education	493	-	-	-	-	<b>493</b>
Energy	-	227	-	-	-	<b>227</b>
Environment	10,709	1,935	263	-	354	<b>13,261</b>
Finance	490	80	-	-	-	<b>570</b>
Gaming	-	-	1,500	-	60	<b>1,560</b>
Health and Wellness	2,430	-	11,713	7,133	11,190	<b>32,466</b>
Human Resources and Employment	847	1,164	-	-	-	<b>2,011</b>
Infrastructure and Transportation	20,745	7,122	-	-	350	<b>28,217</b>
Innovation and Science:						
Alberta Science and Research Authority	805	-	37,224	-	3,975	<b>42,004</b>
Alberta Agricultural Research Institute	712	511	5,526	-	1,300	<b>8,049</b>
Alberta Energy Research Institute	1,471	4,776	6,763	-	314	<b>13,324</b>
Alberta Forestry Research Institute	250	-	1,045	-	-	<b>1,295</b>
Alberta Research Council Inc.	81,692	-	-	-	-	<b>81,692</b>
iCORE Inc. (Informatics Circle of Research Excellence)	1,188	-	9,012	-	-	<b>10,200</b>
Alberta Heritage Foundation for Medical Research	5,832	-	43,043	-	-	<b>48,875</b>
Alberta Ingenuity Fund	1,813	1,491	13,382	-	-	<b>16,686</b>
<i>Sub-total Innovation and Science</i>	<i>93,763</i>	<i>6,778</i>	<i>115,995</i>	-	<i>5,589</i>	<i>222,125</i>
Justice	1,103	-	320	-	-	<b>1,423</b>
Seniors	3	455	88	50	17	<b>613</b>
Solicitor General	202	-	-	-	-	<b>202</b>
Sustainable Resource Development	17,793	5,345	143	-	1,323	<b>24,604</b>
<b>Total</b>	<b>180,437</b>	<b>25,583</b>	<b>130,084</b>	<b>7,208</b>	<b>19,281</b>	<b>362,593</b>

**TABLE 10. Total expenditures by department or agency and activity, 2004-2005**

Department or agency	Research and development			Related scientific activities			Total
	Current	AEP <sup>1</sup>	Capital	Current	AEP <sup>1</sup>	Capital	
in thousands of dollars							
Aboriginal Affairs and Northern Development	-	-	-	126	-	-	126
Advanced Education	-	-	-	657	-	-	657
Agriculture, Food and Rural Development	11,818	-	-	16,061	-	-	27,879
Children's Services	1,295	-	-	684	-	-	1,979
Community Development	-	-	-	3,105	-	-	3,105
Economic Development	-	-	-	700	375	-	1,075
Education	-	-	-	493	-	-	493
Energy	-	-	-	227	-	-	227
Environment	172	2	18	13,063	6	-	13,261
Finance	-	-	-	545	-	25	570
Gaming	1,560	-	-	-	-	-	1,560
Health and Wellness	18,519	-	-	12,475	1,472	-	32,466
Human Resources and Employment	-	-	-	1,503	508	-	2,011
Infrastructure and Transportation	855	371	16,519	10,162	165	145	28,217
Innovation and Science:							
Alberta Science and Research Authority	39,809	755	-	1,390	50	-	42,004
Alberta Agricultural Research Institute	6,826	712	-	511	-	-	8,049
Alberta Energy Research Institute	11,717	1,471	-	136	-	-	13,324
Alberta Forestry Research Institute	1,045	250	-	-	-	-	1,295
Alberta Research Council Inc.	67,442	-	4,738	9,512	-	-	81,692
iCORE Inc. (Informatics Circle of Research Excellence)	9,012	1,188	-	-	-	-	10,200
Alberta Heritage Foundation for Medical Research	43,043	5,832	-	-	-	-	48,875
Alberta Ingenuity Fund	14,873	1,813	-	-	-	-	16,686
<i>Sub-total Innovation and Science</i>	<i>193,767</i>	<i>12,021</i>	<i>4,738</i>	<i>11,549</i>	<i>50</i>	<i>-</i>	<i>222,125</i>
Justice	-	-	-	1,423	-	-	1,423
Seniors	133	-	-	477	3	-	613
Solicitor General	-	-	-	202	-	-	202
Sustainable Resource Development	1,473	52	17	21,513	1,372	177	24,604
<b>Total</b>	<b>229,592</b>	<b>12,446</b>	<b>21,292</b>	<b>94,965</b>	<b>3,951</b>	<b>347</b>	<b>362,593</b>

1. Administration of extramural programs (AEP)

**TABLE 11. Total expenditures on R&D by department or agency and performing sector, 2004-2005**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-
Agriculture, Food and Rural Development	11,818	-	-	-	-	<b>11,818</b>
Children's Services	-	1,270	-	25	-	<b>1,295</b>
Community Development	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-
Education	-	-	-	-	-	-
Energy	-	-	-	-	-	-
Environment	72	-	70	-	50	<b>192</b>
Finance	-	-	-	-	-	-
Gaming	-	-	1,500	-	60	<b>1,560</b>
Health and Wellness	-	-	9,575	6,633	2,311	<b>18,519</b>
Human Resources and Employment	-	-	-	-	-	-
Infrastructure and Transportation	17,045	413	-	-	287	<b>17,745</b>
Innovation and Science:						
Alberta Science and Research Authority	755	-	37,034	-	2,775	<b>40,564</b>
Alberta Agricultural Research Institute	712	-	5,526	-	1,300	<b>7,538</b>
Alberta Energy Research Institute	1,471	4,640	6,763	-	314	<b>13,188</b>
Alberta Forestry Research Institute	250	-	1,045	-	-	<b>1,295</b>
Alberta Research Council Inc.	72,180	-	-	-	-	<b>72,180</b>
iCORE Inc. (Informatics Circle of Research Excellence)	1,188	-	9,012	-	-	<b>10,200</b>
Alberta Heritage Foundation for Medical Research	5,832	-	43,043	-	-	<b>48,875</b>
Alberta Ingenuity Fund	1,813	1,491	13,382	-	-	<b>16,686</b>
<i>Sub-total Innovation and Science</i>	<i>84,201</i>	<i>6,131</i>	<i>115,805</i>	-	<i>4,389</i>	<i>210,526</i>
Justice	-	-	-	-	-	-
Seniors	-	65	68	-	-	<b>133</b>
Solicitor General	-	-	-	-	-	-
Sustainable Resource Development	564	925	40	-	13	<b>1,542</b>
<b>Total</b>	<b>113,700</b>	<b>8,804</b>	<b>127,058</b>	<b>6,658</b>	<b>7,110</b>	<b>263,330</b>

**TABLE 12. Intramural expenditures by department or agency and type of expenditure, 2004-2005**

Department or agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
in thousands of dollars				
Aboriginal Affairs and Northern Development	-	-	-	-
Advanced Education	-	650	-	650
Agriculture, Food and Rural Development	25,091	2,788	-	27,879
Children's Services	-	-	-	-
Community Development	2,488	467	-	2,955
Economic Development	375	-	-	375
Education	-	493	-	493
Energy	-	-	-	-
Environment	10,318	373	18	10,709
Finance	465	-	25	490
Gaming	-	-	-	-
Health and Wellness	1,472	958	-	2,430
Human Resources and Employment	680	167	-	847
Infrastructure and Transportation	2,756	1,325	16,664	20,745
Innovation and Science:				
Alberta Science and Research Authority	724	81	-	805
Alberta Agricultural Research Institute	610	102	-	712
Alberta Energy Research Institute	1,247	224	-	1,471
Alberta Forestry Research Institute	250	-	-	250
Alberta Research Council Inc.	39,793	37,161	4,738	81,692
iCORE Inc. (Informatics Circle of Research Excellence)	565	623	-	1,188
Alberta Heritage Foundation for Medical Research	2,140	3,692	-	5,832
Alberta Ingenuity Fund	940	873	-	1,813
<i>Sub-total Innovation and Science</i>	46,269	42,756	4,738	93,763
Justice	831	272	-	1,103
Seniors	-	3	-	3
Solicitor General	115	87	-	202
Sustainable Resource Development	13,850	3,749	194	17,793
<b>Total</b>	<b>104,710</b>	<b>54,088</b>	<b>21,639</b>	<b>180,437</b>

**TABLE 13. Personnel engaged in scientific activities, by department or agency and activities, 2004-2005**

Department or agency	Research and development (R & D)								
	Intramural			Administration of extramural			Total		
	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other
	full-time equivalent								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	58	78	-	-	-	-	58	78	-
Children's Services	-	-	-	-	-	-	-	-	-
Community Development	-	-	-	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-
Environment	1	-	-	-	-	-	1	-	-
Finance	-	-	-	-	-	-	-	-	-
Gaming	-	-	-	-	-	-	-	-	-
Health and Wellness	-	-	-	-	-	-	-	-	-
Human Resources and Employment	-	-	-	-	-	-	-	-	-
Infrastructure and Transportation	3	1	-	3	3	1	6	4	1
Innovation and Science:									
Alberta Science and Research Authority	-	-	-	6	-	4	6	-	4
Alberta Agricultural Research Institute	-	-	-	4	-	3	4	-	3
Alberta Energy Research Institute	-	-	-	7	-	4	7	-	4
Alberta Forestry Research Institute	-	-	-	2	-	-	2	-	-
Alberta Research Council Inc.	135	155	171	-	-	-	135	155	171
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	2	-	3	2	-	3
Alberta Heritage Foundation for Medical Research	-	-	-	7	6	23	7	6	23
Alberta Ingenuity Fund	-	-	-	4	1	-	4	1	-
<i>Sub-total Innovation and Science</i>	<i>135</i>	<i>155</i>	<i>171</i>	<i>32</i>	<i>7</i>	<i>37</i>	<i>167</i>	<i>162</i>	<i>208</i>
Justice	-	-	-	-	-	-	-	-	-
Seniors	-	-	-	-	-	-	-	-	-
Solicitor General	-	-	-	-	-	-	-	-	-
Sustainable Resource Development	5	1	-	1	-	-	6	1	-
<b>Total</b>	<b>202</b>	<b>235</b>	<b>171</b>	<b>36</b>	<b>10</b>	<b>38</b>	<b>238</b>	<b>245</b>	<b>209</b>



**TABLE 13. Continued Personnel engaged in scientific activities, by department or agency and activities, 2004-2005**

Department or agency	Related scientific activities (RSA)									Total scientific personnel								
	Intramural			Administra-tion of extramural			Total			Intramural			Administra-tion of extramural			Total		
	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other
	full-time equivalent																	
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	67	74	-	-	-	-	67	74	-	125	152	-	-	-	-	125	152	-
Children's Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Community Development	36	4	-	-	-	-	36	4	-	36	4	-	-	-	-	36	4	-
Economic Development	-	-	-	6	-	-	6	-	-	-	-	-	6	-	-	6	-	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Environment	115	1	-	-	-	-	115	1	-	116	1	-	-	-	-	116	1	-
Finance	5	1	1	-	-	-	5	1	1	5	1	1	-	-	-	5	1	1
Gaming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Health and Wellness	18	6	3	-	-	-	18	6	3	18	6	3	-	-	-	18	6	3
Human Resources and Employment	6	-	-	9	-	-	15	-	-	6	-	-	9	-	-	15	-	-
Infrastructure and Transportation	12	13	4	2	4	-	14	17	4	15	14	4	5	7	1	20	21	5
Innovation and Science:																		
Alberta Science and Research Authority	-	-	-	1	-	-	1	-	-	-	-	-	7	-	4	7	-	4
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	4	-	3	4	-	3
Alberta Energy Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	7	-	4	7	-	4
Alberta Forestry Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	-
Alberta Research Council Inc.	-	-	-	-	-	-	-	-	-	135	155	171	-	-	-	135	155	171
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	-	-	-	-	-	-	-	2	-	3	2	-	3
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	-	-	-	-	-	-	-	7	6	23	7	6	23
Alberta Ingenuity Fund	-	-	-	-	-	-	-	-	-	-	-	-	4	1	-	4	1	-
<i>Sub-total Innovation and Science</i>	-	-	-	1	-	-	1	-	-	135	155	171	33	7	37	168	162	208
Justice	8	-	-	-	-	-	8	-	-	8	-	-	-	-	-	8	-	-
Seniors	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solicitor General	2	-	-	-	-	-	2	-	-	2	-	-	-	-	-	2	-	-
Sustainable Resource Development	85	78	6	6	2	1	91	80	7	90	79	6	7	2	1	97	81	7
<b>Total</b>	<b>354</b>	<b>177</b>	<b>14</b>	<b>24</b>	<b>6</b>	<b>1</b>	<b>378</b>	<b>183</b>	<b>15</b>	<b>556</b>	<b>412</b>	<b>185</b>	<b>60</b>	<b>16</b>	<b>39</b>	<b>616</b>	<b>428</b>	<b>224</b>

1. S &amp; P = Scientific and Professional.

**TABLE 14. Objectives of expenditures by department or agency, 2004-2005**

Department or agency	Exploration and utilization of the earth	Infrastructure and general planning of land use			Pollution and protection of the environment	Public health	Production distribution and rational utilization of energy	Agriculture production and technology
		Transport	Telecommunication	other				
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	-	-	-	-	-	-	-	27,879
Children's Services	-	-	-	-	-	-	-	-
Community Development	-	-	-	505	-	-	-	-
Economic Development	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	227	-
Environment	-	-	-	-	13,261	-	-	-
Finance	-	-	-	-	-	-	-	-
Gaming	-	-	-	-	-	-	-	-
Health and Wellness	-	-	-	-	-	32,466	-	-
Human Resources and Employment	-	-	-	-	-	-	-	-
Infrastructure and Transportation	-	9,623	-	18,594	-	-	-	-
Innovation and Science:								
Alberta Science and Research Authority	-	-	-	-	-	325	-	-
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	8,049
Alberta Energy Research Institute	-	-	-	-	-	-	6,436	-
Alberta Forestry Research Institute	-	-	-	-	-	-	-	-
Alberta Research Council Inc.	-	-	-	-	13,176	3,639	29,485	12,404
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	-	-	-
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	48,875	-	-
Alberta Ingenuity Fund	-	-	-	-	-	-	-	-
<i>Sub-total Innovation and Science</i>	-	-	-	-	13,176	52,839	35,921	20,453
Justice	-	-	-	-	-	-	-	-
Seniors	-	-	-	-	-	-	-	-
Solicitor General	-	-	-	-	-	-	-	-
Sustainable Resource Development	-	-	-	12,510	8,231	-	-	-
<b>Total</b>	-	<b>9,623</b>	-	<b>31,609</b>	<b>34,668</b>	<b>85,305</b>	<b>36,148</b>	<b>48,332</b>

**TABLE 14. Continued Objectives of expenditures by department or agency, 2004-2005**

Department or agency	Fishing	Forestry	Industrial production & technology	Social development	Exploration & exploitation of space	Basic research	Other civil research	Total
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	126	-	-	-	126
Advanced Education	-	-	-	657	-	-	-	657
Agriculture, Food and Rural Development	-	-	-	-	-	-	-	27,879
Children's Services	-	-	-	1,979	-	-	-	1,979
Community Development	-	-	-	2,600	-	-	-	3,105
Economic Development	-	-	720	-	-	-	355	1,075
Education	-	-	-	493	-	-	-	493
Energy	-	-	-	-	-	-	-	227
Environment	-	-	-	-	-	-	-	13,261
Finance	-	-	-	-	-	570	-	570
Gaming	-	-	-	1,560	-	-	-	1,560
Health and Wellness	-	-	-	-	-	-	-	32,466
Human Resources and Employment	-	-	-	2,011	-	-	-	2,011
Infrastructure and Transportation	-	-	-	-	-	-	-	28,217
Innovation and Science:								
Alberta Science and Research Authority	-	-	-	-	-	41,679	-	42,004
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	8,049
Alberta Energy Research Institute	-	-	-	-	-	6,888	-	13,324
Alberta Forestry Research Institute	-	1,295	-	-	-	-	-	1,295
Alberta Research Council Inc.	-	7,062	15,926	-	-	-	-	81,692
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	10,200	-	10,200
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	-	-	48,875
Alberta Ingenuity Fund	-	-	1,491	-	-	15,195	-	16,686
<i>Sub-total Innovation and Science</i>	-	8,357	17,417	-	-	73,962	-	222,125
Justice	-	-	-	1,423	-	-	-	1,423
Seniors	-	-	-	613	-	-	-	613
Solicitor General	-	-	-	202	-	-	-	202
Sustainable Resource Development	170	2,420	106	732	-	435	-	24,604
<b>Total</b>	<b>170</b>	<b>10,777</b>	<b>18,243</b>	<b>12,396</b>	<b>-</b>	<b>74,967</b>	<b>355</b>	<b>362,593</b>

**TABLE 15. Objectives of expenditures by activity, 2004-2005**

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Exploration and utilization of the earth	-	-	-	-	-
Infrastructure and general planning of land use					
Transport	226	1,925	700	6,772	<b>9,623</b>
Telecommunication	-	-	-	-	-
Other	16,819	11,571	-	3,219	<b>31,609</b>
Pollution and protection of the environment	8,475	21,743	269	4,181	<b>34,668</b>
Public health	7,381	4,520	61,887	11,517	<b>85,305</b>
Production, distribution and rational utilization of energy	28,428	2,528	4,829	363	<b>36,148</b>
Agriculture production and technology	24,934	16,061	6,826	511	<b>48,332</b>
Fishing	-	170	-	-	<b>170</b>
Forestry	7,755	998	1,874	150	<b>10,777</b>
Industrial production and technology	15,926	460	1,491	366	<b>18,243</b>
Social development	-	6,136	2,988	3,272	<b>12,396</b>
Exploration and exploitation of space	-	-	-	-	-
Basic research	3,756	625	68,766	1,820	<b>74,967</b>
Other civil research	-	-	-	355	<b>355</b>
<b>Total</b>	<b>113,700</b>	<b>66,737</b>	<b>149,630</b>	<b>32,526</b>	<b>362,593</b>

**TABLE 16. Total expenditures by activity and performing sector, 2005-2006 estimates**

Activity	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
	in thousands of dollars					
<b>Research and development (R&amp;D)</b>						
Current expenditures:						
In-house R&D	48,966	...	...	...	...	<b>48,966</b>
R&D contracts	35,568	1,578	8,426	565	828	<b>46,965</b>
R&D grants and contributions	...	18,785	110,556	5,635	8,768	<b>143,744</b>
Research fellowships	-	-	4,186	-	-	<b>4,186</b>
Admin of extramural R&D programs	14,644	...	...	...	...	<b>14,644</b>
<i>Sub-total current R&amp;D</i>	<i>99,178</i>	<i>20,363</i>	<i>123,168</i>	<i>6,200</i>	<i>9,596</i>	<i>258,505</i>
Capital expenditures	31,843	...	...	...	...	<b>31,843</b>
<b>Total R&amp;D</b>	<b>131,021</b>	<b>20,363</b>	<b>123,168</b>	<b>6,200</b>	<b>9,596</b>	<b>290,348</b>
<b>Related scientific activities (RSA)</b>						
Current expenditures	60,496	21,097	7,766	-	14,024	<b>103,383</b>
Admin of extramural RSA programs	3,708	...	...	...	...	<b>3,708</b>
<i>Sub-total current RSA</i>	<i>64,204</i>	<i>21,097</i>	<i>7,766</i>	<i>-</i>	<i>14,024</i>	<i>107,091</i>
Capital expenditures	3,845	...	...	...	...	<b>3,845</b>
<b>Total RSA</b>	<b>68,049</b>	<b>21,097</b>	<b>7,766</b>	<b>-</b>	<b>14,024</b>	<b>110,936</b>
<b>Total</b>	<b>199,070</b>	<b>41,460</b>	<b>130,934</b>	<b>6,200</b>	<b>23,620</b>	<b>401,284</b>

**TABLE 17. Total expenditures by department or agency and performing sector, 2005-2006 estimates**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	100	<b>100</b>
Advanced education	650	-	-	-	-	<b>650</b>
Agriculture, Food and Rural Development	27,879	-	-	-	-	<b>27,879</b>
Children's Services	-	2,445	-	-	-	<b>2,445</b>
Community Development	2,815	150	-	-	-	<b>2,965</b>
Economic Development	375	-	-	-	1,054	<b>1,429</b>
Education	396	-	-	-	-	<b>396</b>
Energy	-	183	-	-	-	<b>183</b>
Environment	12,236	7,975	235	-	80	<b>20,526</b>
Finance	430	60	-	-	-	<b>490</b>
Gaming	-	-	1,500	-	60	<b>1,560</b>
Health and Wellness	2,725	-	15,510	6,200	16,386	<b>40,821</b>
Human Resources and Employment	855	950	-	-	-	<b>1,805</b>
Infrastructure and Transportation	31,280	8,969	16	-	709	<b>40,974</b>
Innovation and Science:						
Alberta Science and Research Authority	830	-	28,424	-	3,133	<b>32,387</b>
Alberta Agricultural Research Institute	846	1,381	5,526	-	430	<b>8,183</b>
Alberta Energy Research Institute	2,031	10,952	3,731	-	293	<b>17,007</b>
Alberta Forestry Research Institute	444	1,755	1,175	-	-	<b>3,374</b>
Alberta Research Council Inc.	88,250	-	-	-	-	<b>88,250</b>
iCORE Inc. (Informatics Circle of Research Excellence)	1,500	-	11,000	-	-	<b>12,500</b>
Alberta Heritage Foundation for Medical Research	6,500	-	45,500	-	-	<b>52,000</b>
Alberta Ingenuity Fund	2,096	3,007	17,232	-	-	<b>22,335</b>
<i>Sub-total Innovation and Science</i>	<i>102,497</i>	<i>17,095</i>	<i>112,588</i>	-	<i>3,856</i>	<i>236,036</i>
Justice	208	-	320	-	-	<b>528</b>
Seniors	3	423	12	-	-	<b>438</b>
Solicitor General	147	-	-	-	-	<b>147</b>
Sustainable Resource Development	16,574	3,210	753	-	1,375	<b>21,912</b>
<b>Total</b>	<b>199,070</b>	<b>41,460</b>	<b>130,934</b>	<b>6,200</b>	<b>23,620</b>	<b>401,284</b>

**TABLE 18. Total expenditures by department or agency and activity, 2005-2006 estimates**

Department or agency	Research and development			Related scientific activities			Total
	Current	AEP <sup>1</sup>	Capital	Current	AEP <sup>1</sup>	Capital	
	in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	100	-	-	<b>100</b>
Advanced Education	-	-	-	650	-	-	<b>650</b>
Agriculture, Food and Rural Development	11,818	-	-	16,061	-	-	<b>27,879</b>
Children's Services	2,000	-	-	445	-	-	<b>2,445</b>
Community Development	-	-	-	2,965	-	-	<b>2,965</b>
Economic Development	-	-	-	1,054	375	-	<b>1,429</b>
Education	-	-	-	396	-	-	<b>396</b>
Energy	-	-	-	183	-	-	<b>183</b>
Environment	85	3	5	20,426	7	-	<b>20,526</b>
Finance	-	-	-	470	-	20	<b>490</b>
Gaming	1,560	-	-	-	-	-	<b>1,560</b>
Health and Wellness <sup>2</sup>	20,511	-	-	18,838	1,472	-	<b>40,821</b>
Human Resources and Employment	-	-	-	1,349	456	-	<b>1,805</b>
Infrastructure and Transportation	2,331	394	23,821	10,903	175	3,350	<b>40,974</b>
Innovation and Science:							
Alberta Science and Research Authority	30,712	780	-	845	50	-	<b>32,387</b>
Alberta Agricultural Research Institute	6,826	846	-	511	-	-	<b>8,183</b>
Alberta Energy Research Institute	14,872	2,031	-	104	-	-	<b>17,007</b>
Alberta Forestry Research Institute	2,930	444	-	-	-	-	<b>3,374</b>
Alberta Research Council Inc.	71,690	-	8,000	8,560	-	-	<b>88,250</b>
iCORE Inc. (Informatics Circle of Research Excellence)	11,000	1,500	-	-	-	-	<b>12,500</b>
Alberta Heritage Foundation for Medical Research	45,500	6,500	-	-	-	-	<b>52,000</b>
Alberta Ingenuity Fund	20,239	2,096	-	-	-	-	<b>22,335</b>
<i>Sub-total Innovation and Science</i>	<i>203,769</i>	<i>14,197</i>	<i>8,000</i>	<i>10,020</i>	<i>50</i>	<i>-</i>	<b><i>236,036</i></b>
Justice	-	-	-	528	-	-	<b>528</b>
Seniors	12	-	-	423	3	-	<b>438</b>
Solicitor General	-	-	-	147	-	-	<b>147</b>
Sustainable Resource Development	1,775	50	17	18,425	1,170	475	<b>21,912</b>
<b>Total</b>	<b>243,861</b>	<b>14,644</b>	<b>31,843</b>	<b>103,383</b>	<b>3,708</b>	<b>3,845</b>	<b>401,284</b>

1. Administration of extramural programs

2. Variance due to inclusion of evaluation in ASRA's definition of research. The increase in R&D expenditures over previous year represents a change in the definition of research to include evaluative research, rather than a change in activity level.

**TABLE 19. Total expenditures on R&D by department or agency and performing sector, 2005-2006 estimates**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-
Agriculture, Food and Rural Development	11,818	-	-	-	-	<b>11,818</b>
Children's Services	-	2,000	-	-	-	<b>2,000</b>
Community Development	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-
Education	-	-	-	-	-	-
Energy	..	..	..	..	..	..
Environment	58	-	35	-	-	<b>93</b>
Finance	-	-	-	-	-	-
Gaming	-	-	1,500	-	60	<b>1,560</b>
Health and Wellness	-	-	8,550	6,200	5,761	<b>20,511</b>
Human Resources and Employment	-	-	-	-	-	-
Infrastructure and Transportation	24,365	1,519	16	-	646	<b>26,546</b>
Innovation and Science:						
Alberta Science and Research Authority	780	-	28,306	-	2,406	<b>31,492</b>
Alberta Agricultural Research Institute	846	870	5,526	-	430	<b>7,672</b>
Alberta Energy Research Institute	2,031	10,848	3,731	-	293	<b>16,903</b>
Alberta Forestry Research Institute	444	1,755	1,175	-	-	<b>3,374</b>
Alberta Research Council Inc.	79,690	-	-	-	-	<b>79,690</b>
iCORE Inc. (Informatics Circle of Research Excellence)	1,500	-	11,000	-	-	<b>12,500</b>
Alberta Heritage Foundation for Medical Research	6,500	-	45,500	-	-	<b>52,000</b>
Alberta Ingenuity Fund	2,096	3,007	17,232	-	-	<b>22,335</b>
<i>Sub-total Innovation and Science</i>	<i>93,887</i>	<i>16,480</i>	<i>112,470</i>	-	<i>3,129</i>	<b><i>225,966</i></b>
Justice	-	-	-	-	-	-
Seniors	-	-	12	-	-	<b>12</b>
Solicitor General	-	-	-	-	-	-
Sustainable Resource Development	893	364	585	-	-	<b>1,842</b>
<b>Total</b>	<b>131,021</b>	<b>20,363</b>	<b>123,168</b>	<b>6,200</b>	<b>9,596</b>	<b>290,348</b>

**TABLE 20. Personnel engaged in scientific activities, by department or agency and activities, 2005-2006 estimates**

Department or agency	Research and development (R & D)								
	Intramural			Administration of extramural			Total		
	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other
	full-time equivalent								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-
Advanced education	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	58	78	-	-	-	-	58	78	-
Children's Services	-	-	-	-	-	-	-	-	-
Community Development	-	-	-	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-
Environment	1	-	-	-	-	-	1	-	-
Finance	-	-	-	-	-	-	-	-	-
Gaming	-	-	-	-	-	-	-	-	-
Health and Wellness	-	-	-	-	-	-	-	-	-
Human Resources and Employment	-	-	-	-	-	-	-	-	-
Infrastructure and Transportation	3	1	-	4	4	1	7	5	1
Innovation and Science:									
Alberta Science and Research Authority	-	-	-	6	-	4	6	-	4
Agricultural Research Institute	-	-	-	4	3	-	4	3	-
Alberta Energy Research Institute	-	-	-	9	-	5	9	-	5
Alberta Forestry Research Institute	-	-	-	3	-	-	3	-	-
Alberta Research Council Inc.	155	195	176	-	-	-	155	195	176
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	2	-	4	2	-	4
Alberta Heritage Foundation for Medical Research	-	-	-	9	6	25	9	6	25
Alberta Ingenuity Fund	-	-	-	6	1	-	6	1	-
<i>Sub-total Innovation and Science</i>	<i>155</i>	<i>195</i>	<i>176</i>	<i>39</i>	<i>10</i>	<i>38</i>	<i>194</i>	<i>205</i>	<i>214</i>
Justice	-	-	-	-	-	-	-	-	-
Seniors	-	-	-	-	-	-	-	-	-
Solicitor General	-	-	-	-	-	-	-	-	-
Sustainable Resource Development	5	-	-	1	-	-	6	-	-
<b>Total</b>	<b>222</b>	<b>274</b>	<b>176</b>	<b>44</b>	<b>14</b>	<b>39</b>	<b>266</b>	<b>288</b>	<b>215</b>



**TABLE 20. Continued Personnel engaged in scientific activities, by department or agency and activities, 2005-2006 estimates**

Department or agency	Related scientific activities (RSA)									Total scientific personnel								
	Intramural			Administra- tion of extramural			Total			Intramural			Administra- tion of extramural			Total		
	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other
	full-time equivalent																	
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Advanced education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	67	74	-	-	-	-	67	74	-	125	152	-	-	-	-	125	152	-
Children's Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Community Development	36	3	-	-	-	-	36	3	-	36	3	-	-	-	-	36	3	-
Economic Development	-	-	-	6	-	-	6	-	-	-	-	-	6	-	-	6	-	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Environment	121	-	8	-	-	-	121	-	8	122	-	8	-	-	-	122	-	8
Finance	5	1	1	-	-	-	5	1	1	5	1	1	-	-	-	5	1	1
Gaming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Health and Wellness	18	6	3	-	-	-	18	6	3	18	6	3	-	-	-	18	6	3
Human Resources and Employment	7	-	-	8	-	-	15	-	-	7	-	-	8	-	-	15	-	-
Infrastructure and Transportation	12	3	4	2	4	-	14	7	4	15	4	4	6	8	1	21	12	5
Innovation and Science:																		
Alberta Science and Research Authority	-	-	-	1	-	-	1	-	-	-	-	-	7	-	4	7	-	4
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	4	3	-	4	3	-
Alberta Energy Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	9	-	5	9	-	5
Alberta Forestry Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	3	-	-
Alberta Research Council Inc.	-	-	-	-	-	-	-	-	-	155	195	176	-	-	-	155	195	176
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	-	-	-	-	-	-	-	2	-	4	2	-	4
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	-	-	-	-	-	-	-	9	6	25	9	6	25
Alberta Ingenuity Fund	-	-	-	-	-	-	-	-	-	-	-	-	6	1	-	6	1	-
<i>Sub-total Innovation and Science</i>	-	-	-	1	-	-	1	-	-	155	195	176	40	10	38	195	205	214
Justice	9	-	-	-	-	-	9	-	-	9	-	-	-	-	-	9	-	-
Seniors	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solicitor General	2	-	-	-	-	-	2	-	-	2	-	-	-	-	-	2	-	-
Sustainable Resource Development	76	80	6	7	2	1	83	82	7	81	80	6	8	2	1	89	82	7
<b>Total</b>	<b>353</b>	<b>167</b>	<b>22</b>	<b>24</b>	<b>6</b>	<b>1</b>	<b>377</b>	<b>173</b>	<b>23</b>	<b>575</b>	<b>441</b>	<b>198</b>	<b>68</b>	<b>20</b>	<b>40</b>	<b>643</b>	<b>461</b>	<b>238</b>

1. S &amp; P = Scientific and Professional

<b>TABLE 21. Objectives of expenditures by department or agency, 2005-2006 estimates</b>								
Department or agency	Exploration and utilization of the earth	Infrastructure and general planning of land use			Pollution and protection of the environment	Public health	Production distribution and rational utilization of energy	Agriculture production and technology
		Transport	Telecommunication	other				
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-
Advanced education	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	-	-	-	-	-	-	-	27,879
Children's Services	-	-	-	-	-	-	-	-
Community Development	-	-	-	485	-	-	-	-
Economic Development	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	183	-
Environment	-	-	-	-	20,526	-	-	-
Finance	-	-	-	-	-	-	-	-
Gaming	-	-	-	-	-	-	-	-
Health and Wellness	-	-	-	-	-	40,821	-	-
Human Resources and Employment	-	-	-	-	-	-	-	-
Infrastructure and Transportation	-	15,078	-	25,896	-	-	-	-
Innovation and Science:								
Alberta Science and Research Authority	-	-	-	-	-	425	-	-
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	8,183
Alberta Energy Research Institute	-	-	-	-	-	-	13,276	-
Alberta Forestry Research Institute	-	-	-	-	-	-	-	-
Alberta Research Council Inc.	-	-	-	-	12,996	6,419	30,195	6,018
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	-	-	-
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	52,000	-	-
Alberta Ingenuity Fund	-	-	-	-	-	-	-	-
<i>Sub-total Innovation and Science</i>	-	-	-	-	12,996	58,844	43,471	14,201
Justice	-	-	-	-	-	-	-	-
Seniors	-	-	-	-	-	-	-	-
Solicitor General	-	-	-	-	-	-	-	-
Sustainable Resource Development	-	-	-	11,997	6,410	-	-	-
<b>Total</b>	-	<b>15,078</b>	-	<b>38,378</b>	<b>39,932</b>	<b>99,665</b>	<b>43,654</b>	<b>42,080</b>

**TABLE 21.** Continued **Objectives of expenditures by department or agency, 2005-2006 estimates**

Department or agency	Fishing	Forestry	Industrial produc- tion & technology	Social development	Exploration & exploitation of space	Basic research	Other civil research	Total
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	100	-	-	-	<b>100</b>
Advanced Education	-	-	-	650	-	-	-	<b>650</b>
Agriculture, Food and Rural Development	-	-	-	-	-	-	-	<b>27,879</b>
Children's Services	-	-	-	2,445	-	-	-	<b>2,445</b>
Community Development	-	-	-	2,480	-	-	-	<b>2,965</b>
Economic Development	-	-	605	-	-	-	824	<b>1,429</b>
Education	-	-	-	396	-	-	-	<b>396</b>
Energy	-	-	-	-	-	-	-	<b>183</b>
Environment	-	-	-	-	-	-	-	<b>20,526</b>
Finance	-	-	-	-	-	490	-	<b>490</b>
Gaming	-	-	-	1,560	-	-	-	<b>1,560</b>
Health and Wellness	-	-	-	-	-	-	-	<b>40,821</b>
Human Resources and Employment	-	-	-	1,805	-	-	-	<b>1,805</b>
Infrastructure and Transportation	-	-	-	-	-	-	-	<b>40,974</b>
Innovation and Science:								
Alberta Science and Research Authority	-	-	-	-	-	31,962	-	<b>32,387</b>
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	<b>8,183</b>
Alberta Energy Research Institute	-	-	-	-	-	3,731	-	<b>17,007</b>
Alberta Forestry Research Institute	-	3,374	-	-	-	-	-	<b>3,374</b>
Alberta Research Council Inc.	-	11,269	21,353	-	-	-	-	<b>88,250</b>
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	12,500	-	<b>12,500</b>
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	-	-	<b>52,000</b>
Alberta Ingenuity Fund	-	-	3,007	-	17,232	2,096	-	<b>22,335</b>
<i>Sub-total Innovation and Science</i>	-	<i>14,643</i>	<i>24,360</i>	-	<i>17,232</i>	<i>50,289</i>	-	<b><i>236,036</i></b>
Justice	-	-	-	528	-	-	-	<b>528</b>
Seniors	-	-	-	438	-	-	-	<b>438</b>
Solicitor General	-	-	-	147	-	-	-	<b>147</b>
Sustainable Resource Development	150	2,197	30	681	-	447	-	<b>21,912</b>
<b>Total</b>	<b>150</b>	<b>16,840</b>	<b>24,995</b>	<b>11,230</b>	<b>17,232</b>	<b>51,226</b>	<b>824</b>	<b>401,284</b>

**TABLE 22. Objectives of expenditures by activity, 2005-2006 estimates**

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Exploration and utilization of the earth	-	-	-	-	-
Infrastructure and general planning of land use					
Transport	244	5,140	2,181	7,513	<b>15,078</b>
Telecommunication	-	-	-	-	-
Other	24,121	11,688	-	2,569	<b>38,378</b>
Pollution and protection of the environment	9,494	20,573	189	9,676	<b>39,932</b>
Public health	11,025	4,619	66,436	17,585	<b>99,665</b>
Production, distribution and rational utilization of energy	29,162	3,064	11,141	287	<b>43,654</b>
Agriculture production and technology	18,682	16,061	6,826	511	<b>42,080</b>
Fishing	-	150	-	-	<b>150</b>
Forestry	12,117	998	3,725	-	<b>16,840</b>
Industrial production and technology	21,353	384	3,007	251	<b>24,995</b>
Social development	-	4,892	3,572	2,766	<b>11,230</b>
Exploration and exploitation of space	-	-	17,232	-	<b>17,232</b>
Basic research	4,823	480	45,018	905	<b>51,226</b>
Other civil research	-	-	-	824	<b>824</b>
<b>Total</b>	<b>131,021</b>	<b>68,049</b>	<b>159,327</b>	<b>42,887</b>	<b>401,284</b>

# **STATISTICAL TABLES**



# **NATURAL SCIENCES**

**TABLE 23. Total expenditures in the natural sciences, by activity, 1997-98 to 2005-2006 estimates**

Activity	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>r</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
<b>Research and development (R&amp;D)</b>									
Current expenditures:									
In-house R&D	11,974	13,584	20,126	21,205	100,371	52,871	53,038	47,663	48,966
R&D contracts	9,049	5,461	3,866	7,309	2,348	48,735	38,147	33,370	46,965
R&D grants and contributions	98,292	129,841	142,805	157,601	123,507	122,722	123,314	133,562	128,651
Research fellowships	-	-	-	-	1,551	2,153	5,257	3,555	4,186
Admin of extramural R&D programs	6,036	7,004	5,761	7,390	10,511	13,624	10,312	12,446	14,644
<i>Sub-total current R&amp;D</i>	<i>125,351</i>	<i>155,890</i>	<i>172,558</i>	<i>193,505</i>	<i>238,288</i>	<i>240,105</i>	<i>230,068</i>	<i>230,596</i>	<i>243,412</i>
Capital expenditures	519	925	40	53	2,194	2,413	5,496	21,292	31,843
<b>Total R&amp;D</b>	<b>125,870</b>	<b>156,815</b>	<b>172,598</b>	<b>193,558</b>	<b>240,482</b>	<b>242,518</b>	<b>235,564</b>	<b>251,888</b>	<b>275,255</b>
<b>Related scientific activities (RSA)</b>									
Current expenditures:									
Education support	326	3,875	90	363	243	5,577	246	204	181
Technical surveys	23,559	18,221	26,687	28,213	25,329	13,485	27,937	36,244	32,564
Information services	7,937	9,779	10,340	11,656	9,954	15,285	11,317	15,317	14,583
Special services and studies	3,190	9,824	6,598	11,941	12,238	30,493	13,876	22,351	30,944
Museum services	2,557	2,520	2,520	2,650	3,650	2,600	2,087	2,100	2,000
Admin of extramural RSA programs	984	863	787	747	665	801	714	1,597	1,406
<i>Sub-total current RSA</i>	<i>38,553</i>	<i>45,082</i>	<i>47,022</i>	<i>55,570</i>	<i>52,079</i>	<i>68,241</i>	<i>56,177</i>	<i>77,813</i>	<i>81,678</i>
Capital expenditures	494	255	150	205	281	750	124	322	3,825
<b>Total RSA</b>	<b>39,047</b>	<b>45,337</b>	<b>47,172</b>	<b>55,775</b>	<b>52,360</b>	<b>68,991</b>	<b>56,301</b>	<b>78,135</b>	<b>85,503</b>
<b>Total</b>	<b>164,917</b>	<b>202,152</b>	<b>219,770</b>	<b>249,333</b>	<b>292,842</b>	<b>311,509</b>	<b>291,865</b>	<b>330,023</b>	<b>360,758</b>

**TABLE 24. Total expenditures in the natural sciences, by department or agency, 1997-98 to 2005-2006 estimates**

Department or agency	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
Aboriginal Affairs and Northern Development	...	...	...	...	15	31	-	-	-
Advanced Education and Career Development	10,400	18,500	...	...	...	...	...	...	...
Agriculture, Food and Rural Development <sup>1</sup>	36,845	40,817	33,134	33,270	32,373	25,958	24,573	27,879	27,879
Community Development	2,370	2,370	2,370	2,915	3,845	3,224	2,582	2,605	2,485
Economic Development	8,193	3,600	...	...	...	...	...	...	...
Energy	10,887	16,708	...	...	50	302	...	...	...
Environment	...	...	...	32,292	11,412	8,658	11,420	13,261	20,526
Environmental Protection	24,967	24,658	25,000	...	...	...	...	...	...
Health and Wellness <sup>2</sup>	6,035	6,791	10,776	13,536	15,280	40,976	13,760	12,772	11,841
Infrastructure and Transportation	...	...	9,648	12,529	508	543	3,424	28,217	40,974
Innovation and Science									
Alberta Science and Research Authority	...	...	77,546	74,197	38,941	40,624	40,077	40,564	31,492
Alberta Agricultural Research Institute <sup>1</sup>	...	...	7,383	8,780	6,725	6,826	8,328	8,049	8,183
Alberta Energy Research Institute	...	...	7,649	7,258	7,590	6,705	10,261	13,324	17,007
Alberta Forestry Research Institute	...	...	...	1,746	2,112	1,750	1,955	1,295	3,374
Alberta Research Council Inc. <sup>3</sup>	...	...	...	...	82,706	79,024	79,304	81,692	88,250
iCORE Inc. (Informatics Circle of Research Excellence)	...	...	855	10,004	5,863	10,079	9,737	10,200	12,500
Alberta Heritage Foundation for Medical Research	34,296	40,708	45,409	52,806	60,802	54,494	47,604	48,875	52,000
Alberta Ingenuity Fund	...	...	...	...	276	6,777	10,847	16,686	22,335
<i>Sub total Innovation and Science</i>	<i>34,296</i>	<i>40,708</i>	<i>138,842</i>	<i>154,791</i>	<i>205,015</i>	<i>206,279</i>	<i>208,113</i>	<i>220,685</i>	<i>235,141</i>
Science, Research and Information Technology <sup>4</sup>	26,848	42,004	...	...	...	...	...	...	...
Sustainable Resource Development	...	...	...	...	14,656	13,418	17,087	24,604	21,912
Transportation	4,076	5,996	...	...	9,688	12,120	10,906	...	...
<b>Total</b>	<b>164,917</b>	<b>202,152</b>	<b>219,770</b>	<b>249,333</b>	<b>292,842</b>	<b>311,509</b>	<b>291,865</b>	<b>330,023</b>	<b>360,758</b>

- From 1995 to 1998 the Alberta Agricultural Research Institute expenditures reported through the Department of Agriculture, Food and Rural Development.
- The research investments by AHW, particularly in the area of Related Scientific Activity, have decreased in 2004-05 due to the completion of funding programs such as the Medical Services Delivery Innovation Fund and the Health Innovation Fund.
- As of 2001, the Alberta Research Council Inc (ARC) is included as an agency under Innovation and Science. Previously ARC was included in the provincial research organizations survey. Please note ARC includes both annual funding by the government of Alberta and other sources.
- Formed the foundation of the ministry of Innovation and Science that was created in 1999 to consolidate the government's scientific research, development and application activities.

**TABLE 25. Total expenditures in the natural sciences, by performing sector, 1997-98 to 2005-2006 estimates**

Performing sector	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
Intramural	49,432	52,885	58,841	68,020	150,807	141,406	142,742	173,523	192,980
Business enterprises	15,841	26,242	16,552	21,794	21,516	25,954	17,768	21,330	37,399
Higher education	55,486	72,634	91,799	101,021	99,749	106,710	116,525	125,836	122,024
Hospitals and health organizations	3,816	3,090	7,075	6,716	8,431	7,800	1,796	565	565
Alberta Research Council <sup>1</sup>	29,918	32,857	36,367	33,693	...	...	...	...	...
Other	10,424	14,444	9,136	18,089	12,339	29,639	13,034	8,769	7,790
<b>Total</b>	<b>164,917</b>	<b>202,152</b>	<b>219,770</b>	<b>249,333</b>	<b>292,842</b>	<b>311,509</b>	<b>291,865</b>	<b>330,023</b>	<b>360,758</b>

- From 1995 to 2000 includes only annual funding by the Government of Alberta - other funds are not included. As of 2001, the Alberta Research Council is included as an agency under Innovation and Science and industry funded scientific activities performed by ARC are included.

**TABLE 26. Total expenditures on R&D, in the natural sciences, by performing sector, 1997-98 to 2005-2006 estimates**

Performing sector	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>r</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
Intramural	18,529	21,513	26,077	28,894	113,273	107,920	101,140	113,700	131,021
Business enterprises	10,705	19,777	5,702	7,741	9,673	13,892	8,328	7,469	18,363
Higher education	55,404	68,922	91,369	101,019	99,696	104,389	116,256	125,040	121,156
Hospitals and health organizations	3,416	2,800	6,800	6,441	8,048	7,800	1,796	565	565
Alberta Research Council <sup>1</sup>	29,105	31,979	35,667	33,333	...	...	...	...	...
Other	8,711	11,824	6,983	16,130	9,792	8,517	8,044	5,114	4,150
<b>Total</b>	<b>125,870</b>	<b>156,815</b>	<b>172,598</b>	<b>193,558</b>	<b>240,482</b>	<b>242,518</b>	<b>235,564</b>	<b>251,888</b>	<b>275,255</b>

1. From 1995 to 2000 includes only annual funding by the Government of Alberta - other funds are not included. As of 2001, the Alberta Research Council is included as an agency under Innovation and Science and industry funded scientific activities performed by ARC are included.

**TABLE 27. Total expenditures on R&D, in the natural sciences, by department or agency, 1997-98 to 2005-2006 estimates**

Department or agency	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>r</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
Aboriginal Affairs and Northern Development	...	...	...	...	15	31	-	-	-
Advanced Education and Career Development	10,400	18,500	...	...	...	...	...	...	...
Advanced Education	...	...	...	...	...	...	...	-	-
Agriculture, Food and Rural Development <sup>1</sup>	25,626	28,041	19,855	20,289	19,392	14,503	13,549	11,818	11,818
Economic Development	7,801	3,600	-	-	-	-	-	-	-
Energy	10,330	16,387	...	...	50	-	...	...	...
Environment	...	...	...	5,014	1,097	1,173	639	192	93
Environmental Protection	4,247	4,511	3,290	...	...	...	...	...	...
Health and Wellness	5,600	5,600	9,950	12,600	13,119	17,451	12,833	10,065	8,990
Infrastructure and Transportation	...	1,281	1,541	1,604	13	-	2,839	17,745	26,546
Innovation and Science									
Alberta Science and Research Authority	...	38,187	77,421	74,197	38,941	40,534	40,077	40,564	31,492
Alberta Agricultural Research Institute <sup>1</sup>	...	...	6,628	8,040	5,985	5,921	7,380	7,538	7,672
Alberta Energy Research Institute	...	...	7,649	7,258	7,487	6,679	9,862	13,188	16,903
Alberta Forestry Research Institute	...	...	...	1,746	2,112	1,750	1,955	1,295	3,374
Alberta Research Council Inc.	...	...	...	...	82,706	79,024	73,974	72,180	79,690
iCORE Inc. (Informatics Circle of Research Excellence)	...	...	855	10,004	5,863	10,079	9,737	10,200	12,500
Alberta Heritage Foundation for Medical Research	34,296	40,708	45,409	52,806	60,802	54,494	47,604	48,875	52,000
Alberta Ingenuity Fund	...	...	...	...	276	6,777	10,847	16,686	22,335
<i>Sub total Innovation and Science</i>	<i>34,296</i>	<i>78,895</i>	<i>137,962</i>	<i>154,051</i>	<i>204,172</i>	<i>205,258</i>	<i>201,436</i>	<i>210,526</i>	<i>225,966</i>
Science, Research and Information Technology <sup>2</sup>	26,848	...	...	...	...	...	...	...	...
Sustainable Resource Development	...	...	...	...	1,232	1,531	1,734	1,542	1,842
Transportation	722	...	...	...	1,392	2,571	2,534	...	...
<b>Total</b>	<b>125,870</b>	<b>156,815</b>	<b>172,598</b>	<b>193,558</b>	<b>240,482</b>	<b>242,518</b>	<b>235,564</b>	<b>251,888</b>	<b>275,255</b>

1. From 1995 to 1998 the Alberta Agricultural Research Institute expenditures reported through the Department of Agriculture, Food and Rural Development.

2. Formed the foundation of the ministry of Innovation and Science that was created in 1999 to consolidate the government's scientific research, development and application activities.



**TABLE 28. Personnel engaged in natural science activities, by activity and category, 1997-98 to 2005-2006 estimates**

Activity and category	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
	full-time equivalent								
<b>Research and development (R&amp;D):</b>									
Scientific and professional	124	131	95	102	280	191	196	202	222
Technical	94	98	133	136	290	261	192	235	274
Other	2	1	1	1	186	179	163	171	176
<i>Sub-total</i>	220	230	229	239	757	631	551	608	672
<b>Administration of extramural R&amp;D programs:</b>									
Scientific and professional	27	36	25	24	36	48	35	36	44
Technical	8	4	4	10	9	16	12	10	14
Other	28	29	30	26	31	43	44	38	39
<i>Sub-total</i>	63	69	58	60	75	107	91	84	97
<b>Total R&amp;D personnel</b>	<b>283</b>	<b>299</b>	<b>287</b>	<b>299</b>	<b>833</b>	<b>738</b>	<b>642</b>	<b>692</b>	<b>769</b>
<b>Related scientific activities intramural (RSA):</b>									
Scientific and professional	159	174	154	222	179	208	253	309	306
Technical	162	158	190	192	182	134	180	170	160
Other	47	53	23	29	27	16	27	10	18
<i>Sub-total</i>	368	385	367	443	388	358	460	489	484
<b>Administration of extramural RSA programs:</b>									
Scientific and professional	4	5	9	9	63	9	8	8	9
Technical	8	14	10	12	16	7	5	6	6
Other	1	2	2	3	1	1	5	1	1
<i>Sub-total</i>	13	21	21	24	79	17	18	15	16
<b>Total RSA personnel</b>	<b>381</b>	<b>406</b>	<b>388</b>	<b>467</b>	<b>467</b>	<b>375</b>	<b>478</b>	<b>504</b>	<b>500</b>
<b>Total science activities</b>									
Scientific and professional	314	346	283	357	558	456	492	555	581
Technical	272	274	337	350	497	418	389	421	454
Other	78	85	56	59	245	239	239	220	234
<b>Total scientific personnel</b>	<b>664</b>	<b>705</b>	<b>675</b>	<b>766</b>	<b>1,300</b>	<b>1,113</b>	<b>1,120</b>	<b>1,196</b>	<b>1,269</b>

**TABLE 29. Total expenditures in the natural sciences, by department or agency and source of funds, 2004-2005**

Department or agency	Departmental budget	Transfers from other departments	Transfers from federal government	From trust funds	From business enterprises	From other sources	Total
in thousands of dollars							
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	26,965	914	-	-	-	-	<b>27,879</b>
Community Development	2,605	-	-	-	-	-	<b>2,605</b>
Environment	13,261	-	-	-	-	-	<b>13,261</b>
Health and Wellness	12,772	-	-	-	-	-	<b>12,772</b>
Infrastructure and Transportation	28,138	25	44	-	-	10	<b>28,217</b>
Innovation and Science:							
Alberta Science and Research Authority	40,564	-	-	-	-	-	<b>40,564</b>
Alberta Agricultural Research Institute	8,049	-	-	-	-	-	<b>8,049</b>
Alberta Energy Research Institute	13,324	-	-	-	-	-	<b>13,324</b>
Alberta Forestry Research Institute	1,295	-	-	-	-	-	<b>1,295</b>
Alberta Research Council Inc.	27,277	19,268	2,469	-	25,885	6,793	<b>81,692</b>
iCORE Inc. (Informatics Circle of Research Excellence)	10,200	-	-	-	-	-	<b>10,200</b>
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	48,875	<b>48,875</b>
Alberta Ingenuity Fund	-	-	-	-	-	16,686	<b>16,686</b>
<i>Sub-total Innovation and Science</i>	<i>100,709</i>	<i>19,268</i>	<i>2,469</i>	-	<i>25,885</i>	<i>72,354</i>	<b><i>220,685</i></b>
Sustainable Resource Development	23,163	-	120	-	-	1,321	<b>24,604</b>
<b>Total</b>	<b>207,613</b>	<b>20,207</b>	<b>2,633</b>	-	<b>25,885</b>	<b>73,685</b>	<b>330,023</b>

**TABLE 30. Total expenditures in the natural sciences, by activity and performing sector, 2004-2005**

Activity	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
<b>Research and development (R&amp;D)</b>						
Current expenditures:						
In-house R&D	47,663	...	...	...	...	<b>47,663</b>
R&D contracts	32,299	843	121	-	107	<b>33,370</b>
R&D grants and contributions	...	6,626	121,364	565	5,007	<b>133,562</b>
Research fellowships	-	-	3,555	-	-	<b>3,555</b>
Admin of extramural R&D programs	12,446	...	...	...	...	<b>12,446</b>
<i>Sub-total current R&amp;D</i>	<i>92,408</i>	<i>7,469</i>	<i>125,040</i>	<i>565</i>	<i>5,114</i>	<i>230,596</i>
Capital expenditures	21,292	...	...	...	...	<b>21,292</b>
<b>Total R&amp;D</b>	<b>113,700</b>	<b>7,469</b>	<b>125,040</b>	<b>565</b>	<b>5,114</b>	<b>251,888</b>
<b>Related scientific activities (RSA)</b>						
Current expenditures:						
Education support	141	-	63	-	-	<b>204</b>
Technical surveys	26,396	8,823	150	-	875	<b>36,244</b>
Information services	14,664	241	5	-	407	<b>15,317</b>
Special services and studies	14,603	4,797	578	-	2,373	<b>22,351</b>
Museum services	2,100	-	-	-	-	<b>2,100</b>
Admin of extramural RSA programs	1,597	...	...	...	...	<b>1,597</b>
<i>Sub-total current RSA</i>	<i>59,501</i>	<i>13,861</i>	<i>796</i>	<i>-</i>	<i>3,655</i>	<i>77,813</i>
Capital expenditures	322	...	...	...	...	<b>322</b>
<b>Total RSA</b>	<b>59,823</b>	<b>13,861</b>	<b>796</b>	<b>-</b>	<b>3,655</b>	<b>78,135</b>
<b>Total</b>	<b>173,523</b>	<b>21,330</b>	<b>125,836</b>	<b>565</b>	<b>8,769</b>	<b>330,023</b>

**TABLE 31. Total expenditures in the natural sciences, by department or agency and performing sector, 2004-2005**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	-	-
Agriculture, Food and Rural Development	27,879	-	-	-	-	27,879
Community Development	2,455	150	-	-	-	2,605
Environment	10,709	1,935	263	-	354	13,261
Health and Wellness	229	-	9,625	565	2,353	12,772
Infrastructure and Transportation	20,745	7,122	-	-	350	28,217
Innovation and Science:						
Alberta Science and Research Authority	755	-	37,034	-	2,775	40,564
Alberta Agricultural Research Institute	712	511	5,526	-	1,300	8,049
Alberta Energy Research Institute	1,471	4,776	6,763	-	314	13,324
Alberta Forestry Research Institute	250	-	1,045	-	-	1,295
Alberta Research Council Inc.	81,692	-	-	-	-	81,692
iCORE Inc. (Informatics Circle of Research Excellence)	1,188	-	9,012	-	-	10,200
Alberta Heritage Foundation for Medical Research	5,832	-	43,043	-	-	48,875
Alberta Ingenuity Fund	1,813	1,491	13,382	-	-	16,686
<i>Sub-total Innovation and Science</i>	93,713	6,778	115,805	-	4,389	220,685
Sustainable Resource Development	17,793	5,345	143	-	1,323	24,604
<b>Total</b>	<b>173,523</b>	<b>21,330</b>	<b>125,836</b>	<b>565</b>	<b>8,769</b>	<b>330,023</b>

**TABLE 32. Total expenditures in the natural sciences, by department or agency and activity, 2004-2005**

Department or agency	Research and development			Related scientific activities							Total
	Current	AEP <sup>1</sup>	Capital	Education support	Technical surveys	Information services	Special services & studies	Museum services	AEP <sup>1</sup>	Capital	
in thousands of dollars											
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	11,818	-	-	-	1,606	13,652	803	-	-	-	<b>27,879</b>
Community Development	-	-	-	-	505	-	-	2,100	-	-	<b>2,605</b>
Environment	172	2	18	-	2,242	4	10,817	-	6	-	<b>13,261</b>
Health and Wellness	10,065	-	-	-	-	-	2,653	-	54	-	<b>12,772</b>
Infrastructure and Transportation	855	371	16,519	-	8,353	-	1,809	-	165	145	<b>28,217</b>
Innovation and Science:											
Alberta Science and Research Authority	39,809	755	-	-	-	-	-	-	-	-	<b>40,564</b>
Agricultural Research Institute	6,826	712	-	-	-	63	448	-	-	-	<b>8,049</b>
Alberta Energy Research Institute	11,717	1,471	-	-	-	48	88	-	-	-	<b>13,324</b>
Alberta Forestry Research Institute	1,045	250	-	-	-	-	-	-	-	-	<b>1,295</b>
Alberta Research Council Inc.	67,442	-	4,738	-	4,894	-	4,618	-	-	-	<b>81,692</b>
iCORE Inc. (Informatics Circle of Research Excellence)	9,012	1,188	-	-	-	-	-	-	-	-	<b>10,200</b>
Alberta Heritage Foundation for Medical Research	43,043	5,832	-	-	-	-	-	-	-	-	<b>48,875</b>
Alberta Ingenuity Fund	14,873	1,813	-	-	-	-	-	-	-	-	<b>16,686</b>
<i>Sub-total Innovation and Science</i>	<i>193,767</i>	<i>12,021</i>	<i>4,738</i>	-	<i>4,894</i>	<i>111</i>	<i>5,154</i>	-	-	-	<b><i>220,685</i></b>
Sustainable Resource Development	1,473	52	17	204	18,644	1,550	1,115	-	1,372	177	<b>24,604</b>
<b>Total</b>	<b>218,150</b>	<b>12,446</b>	<b>21,292</b>	<b>204</b>	<b>36,244</b>	<b>15,317</b>	<b>22,351</b>	<b>2,100</b>	<b>1,597</b>	<b>322</b>	<b>330,023</b>

1. Administration of extramural programs.

**TABLE 33. Total expenditures on R&D in the natural sciences, by department or agency and performing sector, 2004-2005**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	-	-
Agriculture, Food and Rural Development	11,818	-	-	-	-	<b>11,818</b>
Community Development	-	-	-	-	-	-
Environment	72	-	70	-	50	<b>192</b>
Health and Wellness	-	-	9,125	565	375	<b>10,065</b>
Infrastructure and Transportation	17,045	413	-	-	287	<b>17,745</b>
Innovation and Science:						
Alberta Science and Research Authority	755	-	37,034	-	2,775	<b>40,564</b>
Alberta Agricultural Research Institute	712	-	5,526	-	1,300	<b>7,538</b>
Alberta Energy Research Institute	1,471	4,640	6,763	-	314	<b>13,188</b>
Alberta Forestry Research Institute	250	-	1,045	-	-	<b>1,295</b>
Alberta Research Council Inc. <sup>1</sup>	72,180	-	-	-	-	<b>72,180</b>
iCORE Inc. (Informatics Circle of Research Excellence)	1,188	-	9,012	-	-	<b>10,200</b>
Alberta Heritage Foundation for Medical Research	5,832	-	43,043	-	-	<b>48,875</b>
Alberta Ingenuity Fund	1,813	1,491	13,382	-	-	<b>16,686</b>
<i>Sub-total Innovation and Science</i>	<i>84,201</i>	<i>6,131</i>	<i>115,805</i>	-	<i>4,389</i>	<i>210,526</i>
Sustainable Resource Development	564	925	40	-	13	<b>1,542</b>
<b>Total</b>	<b>113,700</b>	<b>7,469</b>	<b>125,040</b>	<b>565</b>	<b>5,114</b>	<b>251,888</b>

**TABLE 34. Intramural expenditures in the natural sciences, by department or agency and type of expenditure, 2004-2005**

Department or agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
	in thousands of dollars			
Aboriginal Affairs and Northern Development	-	-	-	-
Agriculture, Food and Rural Development	25,091	2,788	-	<b>27,879</b>
Community Development	2,018	437	-	<b>2,455</b>
Environment	10,318	373	18	<b>10,709</b>
Health and Wellness	54	175	-	<b>229</b>
Infrastructure and Transportation	2,756	1,325	16,664	<b>20,745</b>
Innovation and Science:				
Alberta Science and Research Authority	674	81	-	<b>755</b>
Alberta Agricultural Research Institute	610	102	-	<b>712</b>
Alberta Energy Research Institute	1,247	224	-	<b>1,471</b>
Alberta Forestry Research Institute	250	-	-	<b>250</b>
Alberta Research Council Inc.	39,793	37,161	4,738	<b>81,692</b>
iCORE Inc. (Informatics Circle of Research Excellence)	565	623	-	<b>1,188</b>
Alberta Heritage Foundation for Medical Research	2,140	3,692	-	<b>5,832</b>
Alberta Ingenuity Fund	940	873	-	<b>1,813</b>
<i>Sub-total Innovation and Science</i>	<i>46,219</i>	<i>42,756</i>	<i>4,738</i>	<i>93,713</i>
Sustainable Resource Development	13,850	3,749	194	<b>17,793</b>
<b>Total</b>	<b>100,306</b>	<b>51,603</b>	<b>21,614</b>	<b>173,523</b>

**TABLE 35. Personnel engaged in natural sciences activities, by department or agency and activities, 2004-2005**

Department or agency	Research and development (R&D)								
	Intramural			Administration of extramural			Total		
	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other
	full-time equivalent								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	58	78	-	-	-	-	58	78	-
Community Development	-	-	-	-	-	-	-	-	-
Environment	1	-	-	-	-	-	1	-	-
Health and Wellness	-	-	-	-	-	-	-	-	-
Infrastructure and Transportation	3	1	-	3	3	1	6	4	1
Innovation and Science:									
Alberta Science and Research Authority	-	-	-	6	-	4	6	-	4
Alberta Agricultural Research Institute	-	-	-	4	-	3	4	-	3
Alberta Energy Research Institute	-	-	-	7	-	4	7	-	4
Alberta Forestry Research Institute	-	-	-	2	-	-	2	-	-
Alberta Research Council Inc.	135	155	171	-	-	-	135	155	171
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	2	-	3	2	-	3
Alberta Heritage Foundation for Medical Research	-	-	-	7	6	23	7	6	23
Alberta Ingenuity Fund	-	-	-	4	1	-	4	1	-
<i>Sub-total Innovation and Science</i>	<i>135</i>	<i>155</i>	<i>171</i>	<i>32</i>	<i>7</i>	<i>37</i>	<i>167</i>	<i>162</i>	<i>208</i>
Sustainable Resource Development	5	1	-	1	-	-	6	1	-
<b>Total</b>	<b>202</b>	<b>235</b>	<b>171</b>	<b>36</b>	<b>10</b>	<b>38</b>	<b>238</b>	<b>245</b>	<b>209</b>



**TABLE 35. Continued Personnel engaged in natural science activities, by department or agency and activities, 2004-2005**

Department or agency	Related scientific activities (RSA)									Total scientific personnel								
	Intramural			Administra- tion of extramural			Total			Intramural			Administra- tion of extramural			Total		
	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other
	full-time equivalent																	
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	67	74	-	-	-	-	67	74	-	125	152	-	-	-	-	125	152	-
Community Development	29	4	-	-	-	-	29	4	-	29	4	-	-	-	-	29	4	-
Environment	115	1	-	-	-	-	115	1	-	116	1	-	-	-	-	116	1	-
Health and Wellness	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-
Infrastructure and Transportation	12	13	4	2	4	-	14	17	4	15	14	4	5	7	1	20	21	5
Innovation and Science:																		
Alberta Science and Research Authority	-	-	-	-	-	-	-	-	-	-	-	-	6	-	4	6	-	4
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	4	-	3	4	-	3
Alberta Energy Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	7	-	4	7	-	4
Alberta Forestry Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	-
Alberta Research Council Inc.	-	-	-	-	-	-	-	-	-	135	155	171	-	-	-	135	155	171
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	-	-	-	-	-	-	-	2	-	3	2	-	3
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	-	-	-	-	-	-	-	7	6	23	7	6	23
Alberta Ingenuity Fund	-	-	-	-	-	-	-	-	-	-	-	-	4	1	-	4	1	-
<i>Sub-total Innovation and Science</i>	-	-	-	-	-	-	-	-	-	135	155	171	32	7	37	167	162	208
Sustainable Resource Development	85	78	6	6	2	1	91	80	7	90	79	6	7	2	1	97	81	7
<b>Total</b>	<b>309</b>	<b>170</b>	<b>10</b>	<b>8</b>	<b>6</b>	<b>1</b>	<b>317</b>	<b>176</b>	<b>11</b>	<b>511</b>	<b>405</b>	<b>181</b>	<b>44</b>	<b>16</b>	<b>39</b>	<b>555</b>	<b>421</b>	<b>220</b>

1. S &amp; P = Scientific and Professional

<b>TABLE 36. Objectives of expenditures in the natural sciences, by department or agency, 2004-2005</b>								
Department or agency	Exploration and utilization of the earth	Infrastructure and general planning of land use			Pollution and protection of the environment	Public health	Production distribution and rational utilization of energy	Agriculture production and technology
		Transport	Telecommunication	other				
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	-	-	-	-	-	-	-	27,879
Community Development	-	-	-	505	-	-	-	-
Environment	-	-	-	-	13,261	-	-	-
Health and Wellness	-	-	-	-	-	12,772	-	-
Infrastructure and Transportation	-	9,623	-	18,594	-	-	-	-
Innovation and Science:								
Alberta Science and Research Authority	-	-	-	-	-	325	-	-
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	8,049
Alberta Energy Research Institute	-	-	-	-	-	-	6,436	-
Alberta Forestry Research Institute	-	-	-	-	-	-	-	-
Alberta Research Council Inc.	-	-	-	-	13,176	3,639	29,485	12,404
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	-	-	-
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	48,875	-	-
Alberta Ingenuity Fund	-	-	-	-	-	-	-	-
<i>Sub-total Innovation and Science</i>	-	-	-	-	13,176	52,839	35,921	20,453
Sustainable Resource Development	-	-	-	12,510	8,231	-	-	-
<b>Total</b>	-	<b>9,623</b>	-	<b>31,609</b>	<b>34,668</b>	<b>65,611</b>	<b>35,921</b>	<b>48,332</b>

**TABLE 36. Continued Objectives of expenditures in the natural sciences, by department or agency, 2004-2005**

Department or agency	Fishing	Forestry	Industrial production & technology	Social development	Exploration & exploitation of space	Basic research	Other civil research	Total
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	-	-	-	-	-	-	-	27,879
Community Development	-	-	-	2,100	-	-	-	2,605
Environment	-	-	-	-	-	-	-	13,261
Health and Wellness	-	-	-	-	-	-	-	12,772
Infrastructure and Transportation	-	-	-	-	-	-	-	28,217
Innovation and Science:								
Alberta Science and Research Authority	-	-	-	-	-	40,239	-	40,564
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	8,049
Alberta Energy Research Institute	-	-	-	-	-	6,888	-	13,324
Alberta Forestry Research Institute	-	1,295	-	-	-	-	-	1,295
Alberta Research Council Inc.	-	7,062	15,926	-	-	-	-	81,692
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	10,200	-	10,200
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	-	-	48,875
Alberta Ingenuity Fund	-	-	1,491	-	-	15,195	-	16,686
<i>Sub-total Innovation and   Science</i>	-	8,357	17,417	-	-	72,522	-	220,685
Sustainable Resource Development	170	2,420	106	732	-	435	-	24,604
<b>Total</b>	<b>170</b>	<b>10,777</b>	<b>17,523</b>	<b>2,832</b>	<b>-</b>	<b>72,957</b>	<b>-</b>	<b>330,023</b>

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
in thousands of dollars					
Exploration and utilization of the earth	-	-	-	-	-
Infrastructure and general planning of land use					
Transport	226	1,925	700	6,772	<b>9,623</b>
Telecommunication	-	-	-	-	-
Other	16,819	11,571	-	3,219	<b>31,609</b>
Pollution and protection of the environment	8,475	21,743	269	4,181	<b>34,668</b>
Public health	7,381	2,319	53,433	2,478	<b>65,611</b>
Production, distribution and rational utilization of energy	28,428	2,528	4,829	136	<b>35,921</b>
Agriculture production and technology	24,934	16,061	6,826	511	<b>48,332</b>
Fishing	-	170	-	-	<b>170</b>
Forestry	7,755	998	1,874	150	<b>10,777</b>
Industrial production and technology	15,926	85	1,491	21	<b>17,523</b>
Social development	-	2,338	-	494	<b>2,832</b>
Exploration and exploitation of space	-	-	-	-	-
Basic research	3,756	85	68,766	350	<b>72,957</b>
Other civil research	-	-	-	-	-
<b>Total</b>	<b>113,700</b>	<b>59,823</b>	<b>138,188</b>	<b>18,312</b>	<b>330,023</b>

Activity	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
<b>Research and development (R&amp;D):</b>						
Current expenditures:						
In-house R&D	48,966	...	...	...	...	<b>48,966</b>
R&D contracts	35,568	1,578	8,426	565	828	<b>46,965</b>
R&D grants and contributions	...	16,785	108,544	-	3,322	<b>128,651</b>
Research fellowships	-	-	4,186	-	-	<b>4,186</b>
Admin of extramural R&D programs	14,644	...	...	...	...	<b>14,644</b>
<i>Sub-total current R&amp;D</i>	<i>99,178</i>	<i>18,363</i>	<i>121,156</i>	<i>565</i>	<i>4,150</i>	<b><i>243,412</i></b>
Capital expenditures	31,843	...	...	...	...	<b>31,843</b>
<b>Total R&amp;D</b>	<b>131,021</b>	<b>18,363</b>	<b>121,156</b>	<b>565</b>	<b>4,150</b>	<b>275,255</b>
<b>Related scientific activities (RSA):</b>						
Current expenditures:						
Education support	118	-	63	-	-	<b>181</b>
Technical survey	24,024	7,494	170	-	876	<b>32,564</b>
Information services	14,003	168	5	-	407	<b>14,583</b>
Special services and studies	16,583	11,374	630	-	2,357	<b>30,944</b>
Museum services	2,000	-	-	-	-	<b>2,000</b>
Admin of extramural RSA programs	1,406	...	...	...	...	<b>1,406</b>
<i>Sub-total current RSA</i>	<i>58,134</i>	<i>19,036</i>	<i>868</i>	<i>-</i>	<i>3,640</i>	<b><i>81,678</i></b>
Capital expenditures	3,825	...	...	...	...	<b>3,825</b>
<b>Total RSA</b>	<b>61,959</b>	<b>19,036</b>	<b>868</b>	<b>-</b>	<b>3,640</b>	<b>85,503</b>
<b>Total</b>	<b>192,980</b>	<b>37,399</b>	<b>122,024</b>	<b>565</b>	<b>7,790</b>	<b>360,758</b>

**TABLE 39. Total expenditures in the natural sciences, by department or agency and performing sector, 2005-2006 estimates**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	-	-
Agriculture, Food and Rural Development	27,879	-	-	-	-	<b>27,879</b>
Community Development	2,335	150	-	-	-	<b>2,485</b>
Environment	12,236	7,975	235	-	80	<b>20,526</b>
Health and Wellness	229	-	8,550	565	2,497	<b>11,841</b>
Infrastructure and Transportation	31,280	8,969	16	-	709	<b>40,974</b>
Innovation and Science:						
Alberta Science and Research Authority	780	-	28,306	-	2,406	<b>31,492</b>
Alberta Agricultural Research Institute	846	1,381	5,526	-	430	<b>8,183</b>
Alberta Energy Research Institute	2,031	10,952	3,731	-	293	<b>17,007</b>
Alberta Forestry Research Institute	444	1,755	1,175	-	-	<b>3,374</b>
Alberta Research Council Inc.	88,250	-	-	-	-	<b>88,250</b>
iCORE Inc. (Informatics Circle of Research Excellence)	1,500	-	11,000	-	-	<b>12,500</b>
Alberta Heritage Foundation for Medical Research	6,500	-	45,500	-	-	<b>52,000</b>
Alberta Ingenuity Fund	2,096	3,007	17,232	-	-	<b>22,335</b>
<i>Sub-total Innovation and Science</i>	<i>102,447</i>	<i>17,095</i>	<i>112,470</i>	-	<i>3,129</i>	<b><i>235,141</i></b>
Sustainable Resource Development	16,574	3,210	753	-	1,375	<b>21,912</b>
<b>Total</b>	<b>192,980</b>	<b>37,399</b>	<b>122,024</b>	<b>565</b>	<b>7,790</b>	<b>360,758</b>

**TABLE 40. Total expenditures in the natural sciences, by department or agency and activity, 2005-2006 estimates**

Department or agency	Research and development			Related scientific activities						Total	
	Current	AEP <sup>1</sup>	Capital	Education support	Technical surveys	Information services	Special services & studies	Museum services	AEP <sup>1</sup>		Capital
in thousands of dollars											
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	11,818	-	-	-	1,606	13,652	803	-	-	-	<b>27,879</b>
Community Development	-	-	-	-	485	-	-	2,000	-	-	<b>2,485</b>
Environment	85	3	5	-	2,271	-	18,155	-	7	-	<b>20,526</b>
Health and Wellness	8,990	-	-	-	-	-	2,797	-	54	-	<b>11,841</b>
Infrastructure and Transportation	2,331	394	23,821	-	8,128	-	2,775	-	175	3,350	<b>40,974</b>
Innovation and Science:											
Alberta Science and Research Authority	30,712	780	-	-	-	-	-	-	-	-	<b>31,492</b>
Alberta Agricultural Research Institute	6,826	846	-	-	-	63	448	-	-	-	<b>8,183</b>
Alberta Energy Research Institute	14,872	2,031	-	-	-	2	102	-	-	-	<b>17,007</b>
Alberta Forestry Research Institute	2,930	444	-	-	-	-	-	-	-	-	<b>3,374</b>
Alberta Research Council Inc.	71,690	-	8,000	-	3,602	-	4,958	-	-	-	<b>88,250</b>
iCORE Inc. (Informatics Circle of Research Excellence)	11,000	1,500	-	-	-	-	-	-	-	-	<b>12,500</b>
Alberta Heritage Foundation for Medical Research	45,500	6,500	-	-	-	-	-	-	-	-	<b>52,000</b>
Alberta Ingenuity Fund	20,239	2,096	-	-	-	-	-	-	-	-	<b>22,335</b>
<i>Sub-total Innovation and Science</i>	<i>203,769</i>	<i>14,197</i>	<i>8,000</i>	-	<i>3,602</i>	<i>65</i>	<i>5,508</i>	-	-	-	<i><b>235,141</b></i>
Sustainable Resource Development	1,775	50	17	181	16,472	866	906	-	1,170	475	<b>21,912</b>
<b>Total</b>	<b>228,768</b>	<b>14,644</b>	<b>31,843</b>	<b>181</b>	<b>32,564</b>	<b>14,583</b>	<b>30,944</b>	<b>2,000</b>	<b>1,406</b>	<b>3,825</b>	<b>360,758</b>

1. Administration of extramural programs.

**TABLE 41. Total expenditures on R&D in the natural sciences, by department or agency and performing sector, 2005-2006 estimates**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	-	-
Agriculture, Food and Rural Development	11,818	-	-	-	-	<b>11,818</b>
Community Development	-	-	-	-	-	-
Environment	58	-	35	-	-	<b>93</b>
Health and Wellness	-	-	8,050	565	375	<b>8,990</b>
Infrastructure and Transportation	24,365	1,519	16	-	646	<b>26,546</b>
Innovation and Science:						
Alberta Science and Research Authority	780	-	28,306	-	2,406	<b>31,492</b>
Alberta Agricultural Research Institute	846	870	5,526	-	430	<b>7,672</b>
Alberta Energy Research Institute	2,031	10,848	3,731	-	293	<b>16,903</b>
Alberta Forestry Research Institute	444	1,755	1,175	-	-	<b>3,374</b>
Alberta Research Council Inc.	79,690	-	-	-	-	<b>79,690</b>
iCORE Inc. (Informatics Circle of Research Excellence)	1,500	-	11,000	-	-	<b>12,500</b>
Alberta Heritage Foundation for Medical Research	6,500	-	45,500	-	-	<b>52,000</b>
Alberta Ingenuity Fund	2,096	3,007	17,232	-	-	<b>22,335</b>
<i>Sub-total Innovation and Science</i>	<i>93,887</i>	<i>16,480</i>	<i>112,470</i>	-	<i>3,129</i>	<b><i>225,966</i></b>
Sustainable Resource Development	893	364	585	-	-	<b>1,842</b>
<b>Total</b>	<b>131,021</b>	<b>18,363</b>	<b>121,156</b>	<b>565</b>	<b>4,150</b>	<b>275,255</b>

**TABLE 42. Personnel engaged in natural science activities, by department or agency and activities, 2005-2006 estimates**

Department or agency	Research and development (R&D)								
	Intramural			Administration of extramural			Total		
	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other
	full-time equivalent								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	58	78	-	-	-	-	58	78	-
Community Development	-	-	-	-	-	-	-	-	-
Environment	1	-	-	-	-	-	1	-	-
Health and Wellness	-	-	-	-	-	-	-	-	-
Infrastructure and Transportation	3	1	-	4	4	1	7	5	1
Innovation and Science:									
Alberta Science and Research Authority	-	-	-	6	-	4	6	-	4
Alberta Agricultural Research Institute	-	-	-	4	3	-	4	3	-
Alberta Energy Research Institute	-	-	-	9	-	5	9	-	5
Alberta Forestry Research Institute	-	-	-	3	-	-	3	-	-
Alberta Research Council Inc.	155	195	176	-	-	-	155	195	176
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	2	-	4	2	-	4
Alberta Heritage Foundation for Medical Research	-	-	-	9	6	25	9	6	25
Alberta Ingenuity Fund	-	-	-	6	1	-	6	1	-
<i>Sub-total Innovation and Science</i>	<i>155</i>	<i>195</i>	<i>176</i>	<i>39</i>	<i>10</i>	<i>38</i>	<i>194</i>	<i>205</i>	<i>214</i>
Sustainable Resource Development	5	-	-	1	-	-	6	-	-
<b>Total</b>	<b>222</b>	<b>274</b>	<b>176</b>	<b>44</b>	<b>14</b>	<b>39</b>	<b>266</b>	<b>288</b>	<b>215</b>



**TABLE 42. Continued Personnel engaged in natural science activities, by department or agency and activities, 2005-2006 estimates**

Department or agency	Related scientific activities (RSA)									Total scientific personnel								
	Intramural			Administration of extramural			Total			Intramural			Administration of extramural			Total		
	S & P <sup>1</sup>	Technical	Other	S & P <sup>1</sup>	Technical	Other	S & P <sup>1</sup>	Technical	Other	S & P <sup>1</sup>	Technical	Other	S & P <sup>1</sup>	Technical	Other	S & P <sup>1</sup>	Technical	Other
	full-time equivalent																	
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	67	74	-	-	-	-	67	74	-	125	152	-	-	-	-	125	152	-
Community Development	29	3	-	-	-	-	29	3	-	29	3	-	-	-	-	29	3	-
Environment	121	-	8	-	-	-	121	-	8	122	-	8	-	-	-	122	-	8
Health and Wellness	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-
Infrastructure and Transportation	12	3	4	2	4	-	14	7	4	15	4	4	6	8	1	21	12	5
Innovation and Science:																		
Alberta Science and Research Authority	-	-	-	-	-	-	-	-	-	-	-	-	6	-	4	6	-	4
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	4	3	-	4	3	-
Alberta Energy Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	9	-	5	9	-	5
Alberta Forestry Research Institute	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	3	-	-
Alberta Research Council Inc.	-	-	-	-	-	-	-	-	-	155	195	176	-	-	-	155	195	176
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	-	-	-	-	-	-	-	2	-	4	2	-	4
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	-	-	-	-	-	-	-	9	6	25	9	6	25
Alberta Ingenuity Fund	-	-	-	-	-	-	-	-	-	-	-	-	6	1	-	6	1	-
<i>Sub-total Innovation and Science</i>	-	-	-	-	-	-	-	-	-	155	195	176	39	10	38	194	205	214
Sustainable Resource Development	76	80	6	7	2	1	83	82	7	81	80	6	8	2	1	89	82	7
<b>Total</b>	<b>306</b>	<b>160</b>	<b>18</b>	<b>9</b>	<b>6</b>	<b>1</b>	<b>315</b>	<b>166</b>	<b>19</b>	<b>528</b>	<b>434</b>	<b>194</b>	<b>53</b>	<b>20</b>	<b>40</b>	<b>581</b>	<b>454</b>	<b>234</b>

1. S &amp; P = Scientific and Professional

**TABLE 43. Objectives of expenditures in the natural sciences, by department or agency, 2005-2006 estimates**

Department or agency	Exploration and utilization of the earth	Infrastructure and general planning of land use			Pollution and protection of the environment	Public health	Production distribution and rational utilization of energy	Agriculture production and technology
		Transport	Telecommunication	other				
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	-	-	-	-	-	-	-	27,879
Community Development	-	-	-	485	-	-	-	-
Environment	-	-	-	-	20,526	-	-	-
Health and Wellness	-	-	-	-	-	11,841	-	-
Infrastructure and Transportation	-	15,078	-	25,896	-	-	-	-
Innovation and Science:								
Alberta Science and Research Authority	-	-	-	-	-	425	-	-
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	8,183
Alberta Energy Research Institute	-	-	-	-	-	-	13,276	-
Alberta Forestry Research Institute	-	-	-	-	-	-	-	-
Alberta Research Council Inc.	-	-	-	-	12,996	6,419	30,195	6,018
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	-	-	-
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	52,000	-	-
Alberta Ingenuity Fund	-	-	-	-	-	-	-	-
<i>Sub-total Innovation and Science</i>	-	-	-	-	12,996	58,844	43,471	14,201
Sustainable Resource Development	-	-	-	11,997	6,410	-	-	-
<b>Total</b>	<b>-</b>	<b>15,078</b>	<b>-</b>	<b>38,378</b>	<b>39,932</b>	<b>70,685</b>	<b>43,471</b>	<b>42,080</b>

**TABLE 43. Continued Objectives of expenditures in the natural sciences by department or agency, 2005-2006 estimates**

Department or agency	Fishing	Forestry	Industrial production & technology	Social development	Exploration & exploitation of space	Basic research	Other civil research	Total
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-
Agriculture, Food and Rural Development	-	-	-	-	-	-	-	27,879
Community Development	-	-	-	2,000	-	-	-	2,485
Environment	-	-	-	-	-	-	-	20,526
Health and Wellness	-	-	-	-	-	-	-	11,841
Infrastructure and Transportation	-	-	-	-	-	-	-	40,974
Innovation and Science:								
Alberta Science and Research Authority	-	-	-	-	-	31,067	-	31,492
Alberta Agricultural Research Institute	-	-	-	-	-	-	-	8,183
Alberta Energy Research Institute	-	-	-	-	-	3,731	-	17,007
Alberta Forestry Research Institute	-	3,374	-	-	-	-	-	3,374
Alberta Research Council Inc.	-	11,269	21,353	-	-	-	-	88,250
iCORE Inc. (Informatics Circle of Research Excellence)	-	-	-	-	-	12,500	-	12,500
Alberta Heritage Foundation for Medical Research	-	-	-	-	-	-	-	52,000
Alberta Ingenuity Fund	-	-	3,007	-	17,232	2,096	-	22,335
<i>Sub-total Innovation and Science</i>	-	14,643	24,360	-	17,232	49,394	-	235,141
Sustainable Resource Development	150	2,197	30	681	-	447	-	21,912
<b>Total</b>	<b>150</b>	<b>16,840</b>	<b>24,390</b>	<b>2,681</b>	<b>17,232</b>	<b>49,841</b>	<b>-</b>	<b>360,758</b>

**TABLE 44. Objectives of expenditures in the natural sciences, by activity, 2005-2006 estimates**

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Exploration and utilization of the earth	-	-	-	-	-
Infrastructure and general planning of land use					
Transport	244	5,140	2,181	7,513	<b>15,078</b>
Telecommunication	-	-	-	-	-
Other	24,121	11,688	-	2,569	<b>38,378</b>
Pollution and protection of the environment	9,494	20,573	189	9,676	<b>39,932</b>
Public health	11,025	2,123	54,915	2,622	<b>70,685</b>
Production, distribution and rational utilization of energy	29,162	3,064	11,141	104	<b>43,471</b>
Agriculture production and technology	18,682	16,061	6,826	511	<b>42,080</b>
Fishing	-	150	-	-	<b>150</b>
Forestry	12,117	998	3,725	-	<b>16,840</b>
Industrial production and technology	21,353	9	3,007	21	<b>24,390</b>
Social development	-	2,153	-	528	<b>2,681</b>
Exploration and exploitation of space	-	-	17,232	-	<b>17,232</b>
Basic research	4,823	-	45,018	-	<b>49,841</b>
Other civil research	-	-	-	-	-
<b>Total</b>	<b>131,021</b>	<b>61,959</b>	<b>144,234</b>	<b>23,544</b>	<b>360,758</b>

# **STATISTICAL TABLES**



## **SOCIAL SCIENCES AND HUMANITIES**

<b>TABLE 45. Total expenditures in the social sciences and humanities, by activity, 1997-98 to 2005-2006 estimates</b>									
<b>Activity</b>	<b>1997-98</b>	<b>1998-99</b>	<b>1999-00</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05<sup>r</sup></b>	<b>2005-06<sup>e</sup></b>
in thousands of dollars									
<b>Research and development (R&amp;D)</b>									
Current expenditures:									
In-house R&D	30	-	-	25	177	-	1,378	-	-
R&D contracts	-	-	-	287	2,922	1,982	566	60	-
R&D grants and contributions	220	250	250	3,378	1,642	4,235	3,850	11,382	15,093
Research fellowships	-	-	-	490	-	-	-	-	-
Admin of extramural R&D programs	-	-	50	18	72	50	49	-	-
<i>Sub-total current R&amp;D</i>	<i>250</i>	<i>250</i>	<i>300</i>	<i>4,198</i>	<i>4,813</i>	<i>6,267</i>	<i>5,843</i>	<i>11,442</i>	<i>15,093</i>
Capital expenditures	-	-	-	-	-	-	-	-	-
<b>Total R&amp;D</b>	<b>250</b>	<b>250</b>	<b>300</b>	<b>4,198</b>	<b>4,813</b>	<b>6,267</b>	<b>5,843</b>	<b>11,442</b>	<b>15,093</b>
<b>Related scientific activities (RSA)</b>									
Current expenditures	12,817	11,759	13,308	9,255	19,192	14,629	15,144	18,749	23,111
Admin of extramural RSA programs	279	256	1,214	1,008	897	976	679	2,354	2,302
<i>Sub-total current RSA</i>	<i>13,096</i>	<i>12,015</i>	<i>14,522</i>	<i>10,263</i>	<i>20,089</i>	<i>15,605</i>	<i>15,823</i>	<i>21,103</i>	<i>25,413</i>
Capital expenditures	125	-	-	-	-	40	15	25	20
<b>Total RSA</b>	<b>13,221</b>	<b>12,015</b>	<b>14,522</b>	<b>10,263</b>	<b>20,089</b>	<b>15,645</b>	<b>15,838</b>	<b>21,128</b>	<b>25,433</b>
<b>Total</b>	<b>13,471</b>	<b>12,265</b>	<b>14,822</b>	<b>14,461</b>	<b>24,902</b>	<b>21,912</b>	<b>21,681</b>	<b>32,570</b>	<b>40,526</b>

**TABLE 46. Total expenditures in the social sciences and humanities, by department or agency, 1997-98 to 2005-2006 estimates**

Department or agency	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
Aboriginal Affairs and Northern Development	...	...	...	...	142	115	92	126	100
Advanced Education	-	...	...	...	...	...	...	657	650
Advanced Education and Career Development	-	...	...	...	...	...	...	...	...
Children's Services	...	...	...	253	265	2,862	2,673	1,979	2,445
Community Development	5,530	5,530	5,530	287	-	-	532	500	480
Economic Development	295	600	...	234	298	696	663	1,075	1,429
Education	153	161	...	...	...	...	...	493	396
Energy	...	...	...	...	...	...	...	227	183
Environment	...	...	...	413	645	709	323	-	-
Environmental Protection	-	-	...	...	...	...	...	...	...
Family and Social Services	231	243	...	...	...	...	...	...	...
Finance	...	...	...	...	...	490	535	570	490
Gaming	...	...	...	1,500	1,500	1,500	1,734	1,560	1,560
Health and Wellness	4,967	3,529	5,048	5,011	14,853	10,516	10,507	19,694	28,980
Human Resources and Employment	...	...	...	2,318	1,916	1,452	1,927	2,011	1,805
Innovation and Science: Alberta Science and Research Authority	...	...	3,484	1,896	2,808	2,032	490	1,440	895
Justice	779	760	760	449	328	356	545	1,423	528
Learning	...	...	...	2,100	2,111	679	1,011	...	...
Science, Research and Information Technology <sup>1</sup>	1,516	1,442	...	...	...	...	...	...	...
Seniors	...	...	...	...	...	17	43	613	438
Solicitor General	...	...	...	...	10	135	202	202	147
Sustainable Resource Development	...	...	...	...	26	353	404	-	-
<b>Total</b>	<b>13,471</b>	<b>12,265</b>	<b>14,822</b>	<b>14,461</b>	<b>24,902</b>	<b>21,912</b>	<b>21,681</b>	<b>32,570</b>	<b>40,526</b>

1. Formed the foundation of the ministry of Innovation and Science that was created in 1999 to consolidate the government's scientific research, development and application activities.

**TABLE 47. Total expenditures in the social sciences and humanities, by performing sector, 1997-98 to 2005-2006 estimates**

Performing sector	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
in thousands of dollars									
Intramural	7,551	7,908	9,185	3,741	1,811	3,989	5,241	6,914	6,090
Business enterprises	1,448	1,935	845	3,559	13,778	7,310	11,243	4,253	4,061
Higher education	2,437	1,394	1,192	2,936	5,279	2,097	3,127	4,248	8,910
Hospitals and health organizations	1,120	536	1,055	1,164	1,480	233	955	6,643	5,635
Alberta Research Council <sup>1</sup>	-	-	-	287	...	...	...	...	...
Other	915	492	2,545	2,774	2,554	8,283	1,115	10,512	15,830
<b>Total</b>	<b>13,471</b>	<b>12,265</b>	<b>14,822</b>	<b>14,461</b>	<b>24,902</b>	<b>21,912</b>	<b>21,681</b>	<b>32,570</b>	<b>40,526</b>

1. From 1994-2000 includes only annual funding by the Government of Alberta - other funds are not included. As of 2001, the Alberta Research Council is included as an agency under Innovation and Science and industry funded scientific activities performed by ARC are included.

**TABLE 48. Total expenditures on R&D in the social sciences and humanities, by performing sector, 1997-98 to 2005-2006 estimates**

Performing sector	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
	in thousands of dollars								
Intramural	-	-	50	43	249	50	1,427	-	-
Business enterprises	-	-	-	1,300	2,700	4,550	2,756	1,335	2,000
Higher education	250	250	250	2,568	1,722	1,667	1,660	2,018	2,012
Hospitals and health organizations	-	-	-	-	-	-	-	6,093	5,635
Alberta Research Council <sup>1</sup>	-	-	-	287	...	...	...	...	...
Other	-	-	-	-	142	-	-	1,996	5,446
<b>Total</b>	<b>250</b>	<b>250</b>	<b>300</b>	<b>4,198</b>	<b>4,813</b>	<b>6,267</b>	<b>5,843</b>	<b>11,442</b>	<b>15,093</b>

1. From 1995 to 2000 includes only annual funding by the Government of Alberta - other funds are not included. As of 2001, the Alberta Research Council is included as an agency under Innovation and Science and industry funded scientific activities performed by ARC are included.

**TABLE 49. Total expenditures on R&D in the social sciences and humanities, by department or agency, 1997-98 to 2005-2006 estimates**

Department or agency	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 <sup>f</sup>	2005-06 <sup>e</sup>
	in thousands of dollars								
Aboriginal Affairs and Northern Development	...	...	...	...	142	-	-	-	-
Advanced Education	...	...	...	...	...	...	...	...	...
Children's Services	...	...	...	-	-	2,735	2,200	1,295	2,000
Community Development	...	...	...	287	-	-	-	-	-
Economic Development	...	...	...	...	...	...	...	-	-
Education	...	...	...	...	...	...	...	...	...
Energy	...	...	...	...	...	-	...	-	-
Environment	...	...	...	...	104	-	-	-	-
Family and Social Services	...	...	...	...	...	...	...	...	...
Finance	...	...	...	...	...	...	...	-	-
Gaming	...	...	...	1,500	1,500	1,500	1,549	1,560	1,560
Health and Wellness	250	250	300	515	259	-	2,094	8,454	11,521
Innovation and Science:									
Alberta Science and Research Authority <sup>1</sup>	...	...	-	1,896	2,808	2,032	-	-	-
Science, Research and Information Technology <sup>1</sup>	...	...	...	...	...	...	...	...	...
Seniors	...	...	...	...	...	...	...	133	12
<b>Total</b>	<b>250</b>	<b>250</b>	<b>300</b>	<b>4,198</b>	<b>4,813</b>	<b>6,267</b>	<b>5,843</b>	<b>11,442</b>	<b>15,093</b>

1. Formed the foundation of the ministry of Innovation and Science that was created in 1999 to consolidate the government's scientific research, development and application activities.



<b>TABLE 50. Personnel engaged in social sciences and humanities, by activities and category, 1997-98 to 2005-2006 estimates</b>									
<b>Activity and category</b>	<b>1997-98</b>	<b>1998-99</b>	<b>1999-00</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05<sup>r</sup></b>	<b>2005-06<sup>e</sup></b>
	full-time equivalent								
<b>Research and development (R&amp;D)</b>									
Scientific and professional	1	-	-	-	3	-	10	-	-
Technical	-	-	-	-	1	1	1	-	-
Other	-	-	-	-	1	-	2	-	-
<i>Sub-total</i>	<i>1</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>5</i>	<i>1</i>	<i>13</i>	<i>-</i>	<i>-</i>
<b>Administration of extramural R&amp;D programs:</b>									
Scientific and professional	-	-	-	1	1	1	-	-	-
Technical	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	1	-	1	-	-
<i>Sub-total</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>-</i>	<i>-</i>
<b>Total R&amp;D personnel</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>14</b>	<b>-</b>	<b>-</b>
<b>Related scientific activities (RSA):</b>									
Scientific and professional	73	75	85	10	21	49	33	45	47
Technical	12	12	10	10	-	22	3	7	7
Other	13	16	19	10	1	1	9	4	4
<i>Sub-total</i>	<i>98</i>	<i>103</i>	<i>114</i>	<i>30</i>	<i>22</i>	<i>72</i>	<i>45</i>	<i>56</i>	<i>58</i>
<b>Administration of extramural RSA programs:</b>									
Scientific and professional	2	3	5	16	15	17	18	16	15
Technical	-	1	-	-	1	-	-	-	-
Other	3	-	24	2	1	1	1	-	-
<i>Sub-total</i>	<i>5</i>	<i>4</i>	<i>29</i>	<i>18</i>	<i>17</i>	<i>18</i>	<i>19</i>	<i>16</i>	<i>15</i>
<b>Total RSA personnel</b>	<b>103</b>	<b>107</b>	<b>143</b>	<b>48</b>	<b>39</b>	<b>90</b>	<b>64</b>	<b>72</b>	<b>73</b>
<b>Total science activities</b>									
Scientific and professional	76	78	90	27	39	67	61	61	62
Technical	12	13	10	10	2	23	4	7	7
Other	16	16	43	12	4	2	13	4	4
<b>Total scientific personnel</b>	<b>104</b>	<b>107</b>	<b>143</b>	<b>49</b>	<b>45</b>	<b>92</b>	<b>78</b>	<b>72</b>	<b>73</b>

Department or agency	Departmental budget	Transfers from other departments	Transfers from federal government	From trust funds	From business enterprises	From other sources	Total
in thousands of dollars							
Aboriginal Affairs and Northern Development	126	-	-	-	-	-	126
Advanced Education	657	-	-	-	-	-	657
Children's Services	1,979	-	-	-	-	-	1,979
Community Development	500	-	-	-	-	-	500
Economic Development	917	158	-	-	-	-	1,075
Education	493	-	-	-	-	-	493
Energy	227	-	-	-	-	-	227
Environment	-	-	-	-	-	-	-
Finance	495	75	-	-	-	-	570
Gaming	1,560	-	-	-	-	-	1,560
Health and Wellness	19,694	-	-	-	-	-	19,694
Human Resources and Employment	1,325	75	611	-	-	-	2,011
Innovation and Science: Alberta Science and Research Authority	1,440	-	-	-	-	-	1,440
Justice	1,286	-	137	-	-	-	1,423
Seniors	613	-	-	-	-	-	613
Solicitor General	127	-	75	-	-	-	202
Sustainable Resource Development	-	-	-	-	-	-	-
<b>Total</b>	<b>31,439</b>	<b>308</b>	<b>823</b>	-	-	-	<b>32,570</b>

Activity	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
<b>Research and development (R&amp;D)</b>						
Current expenditures:						
In-house R&D	-	...	...	...	...	-
R&D contracts	-	-	-	-	60	60
R&D grants and contributions	...	1,335	2,018	6,093	1,936	11,382
Research fellowships	-	-	-	-	-	-
Admin of extramural R&D programs	-	...	...	...	...	-
<i>Sub-total current R&amp;D</i>	-	1,335	2,018	6,093	1,996	11,442
Capital expenditures	-	...	...	...	...	-
<b>Total R&amp;D</b>	-	<b>1,335</b>	<b>2,018</b>	<b>6,093</b>	<b>1,996</b>	<b>11,442</b>
<b>Related scientific activities (RSA)</b>						
Current expenditures	4,535	2,918	2,230	550	8,516	18,749
Admin of extramural RSA programs	2,354	...	...	...	...	2,354
<i>Sub-total current RSA</i>	6,889	2,918	2,230	550	8,516	21,103
Capital expenditures	25	...	...	...	...	25
<b>Total RSA</b>	<b>6,914</b>	<b>2,918</b>	<b>2,230</b>	<b>550</b>	<b>8,516</b>	<b>21,128</b>
<b>Total</b>	<b>6,914</b>	<b>4,253</b>	<b>4,248</b>	<b>6,643</b>	<b>10,512</b>	<b>32,570</b>

**TABLE 53. Total expenditures in the social sciences and humanities, by department or agency and performing sector, 2004-2005**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
Aboriginal Affairs and Northern Development	-	-	-	-	126	126
Advanced Education	650	-	-	-	7	657
Children's Services	-	1,712	62	25	180	1,979
Community Development	500	-	-	-	-	500
Economic Development	375	615	-	-	85	1,075
Education	493	-	-	-	-	493
Energy	-	227	-	-	-	227
Environment	-	-	-	-	-	-
Finance	490	80	-	-	-	570
Gaming	-	-	1,500	-	60	1,560
Health and Wellness	2,201	-	2,088	6,568	8,837	19,694
Human Resources and Employment	847	1,164	-	-	-	2,011
Innovation and Science:						
Alberta Science and Research Authority	50	-	190	-	1,200	1,440
Justice	1,103	-	320	-	-	1,423
Seniors	3	455	88	50	17	613
Solicitor General	202	-	-	-	-	202
Sustainable Resource Development	-	-	-	-	-	-
<b>Total</b>	<b>6,914</b>	<b>4,253</b>	<b>4,248</b>	<b>6,643</b>	<b>10,512</b>	<b>32,570</b>

**TABLE 54. Total expenditures in the social sciences and humanities, by department or agency and activity, 2004-2005**

Department or agency	Research and development			Related scientific activities			Total
	Current	AEP <sup>1</sup>	Capital	Current	AEP <sup>1</sup>	Capital	
in thousands of dollars							
Aboriginal Affairs and Northern Development	-	-	-	126	-	-	126
Advanced Education	-	-	-	657	-	-	657
Children's Services	1,295	-	-	684	-	-	1,979
Community Development	-	-	-	500	-	-	500
Economic Development	-	-	-	700	375	-	1,075
Education	-	-	-	493	-	-	493
Energy	-	-	-	227	-	-	227
Environment	-	-	-	-	-	-	-
Finance	-	-	-	545	-	25	570
Gaming	1,560	-	-	-	-	-	1,560
Health and Wellness	8,454	-	-	9,822	1,418	-	19,694
Human Resources and Employment	-	-	-	1,503	508	-	2,011
Innovation and Science:							
Alberta Science and Research Authority	-	-	-	1,390	50	-	1,440
Justice	-	-	-	1,423	-	-	1,423
Seniors	133	-	-	477	3	-	613
Solicitor General	-	-	-	202	-	-	202
Sustainable Resource Development	-	-	-	-	-	-	-
<b>Total</b>	<b>11,442</b>	<b>-</b>	<b>-</b>	<b>18,749</b>	<b>2,354</b>	<b>25</b>	<b>32,570</b>

1. Administration of extramural programs

**TABLE 55. Total expenditures on R&D in the social sciences and humanities, by department or agency and performing sector, 2004-2005**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
Aboriginal Affairs and Northern Development	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-
Children's Services	-	1,270	-	25	-	1,295
Community Development	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-
Education	-	-	-	-	-	-
Energy	-	-	-	-	-	-
Environment	-	-	-	-	-	-
Finance	-	-	-	-	-	-
Gaming	-	-	1,500	-	60	1,560
Health and Wellness	-	-	450	6,068	1,936	8,454
Human Resources and Employment	-	-	-	-	-	-
Innovation and Science:						
Alberta Science and Research Authority	-	-	-	-	-	-
Justice	-	-	-	-	-	-
Seniors	-	65	68	-	-	133
Solicitor General	-	-	-	-	-	-
Sustainable Resource Development	-	-	-	-	-	-
<b>Total</b>	-	<b>1,335</b>	<b>2,018</b>	<b>6,093</b>	<b>1,996</b>	<b>11,442</b>

**TABLE 56. Intramural expenditures in the social sciences and humanities, by department or agency and type of expenditure, 2004-2005**

Department or agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
in thousands of dollars				
Aboriginal Affairs and Northern Development	-	-	-	-
Advanced Education	-	650	-	650
Children's Services	-	-	-	-
Community Development	470	30	-	500
Economic Development	375	-	-	375
Education	-	493	-	493
Energy	-	-	-	-
Environment	-	-	-	-
Finance	465	-	25	490
Gaming	-	-	-	-
Health and Wellness	1,418	783	-	2,201
Human Resources and Employment	680	167	-	847
Innovation and Science:				
Alberta Science and Research Authority	50	-	-	50
Justice	831	272	-	1,103
Seniors	-	3	-	3
Solicitor General	115	87	-	202
Sustainable Resource Development	-	-	-	-
<b>Total</b>	<b>4,404</b>	<b>2,485</b>	<b>25</b>	<b>6,914</b>

**TABLE 57. Personnel engaged in social sciences and humanities activities, by department or agency and activities, 2004-2005**

Department or agency	Research and development (R & D)								
	Intramural			Administration of extramural			Total		
	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other
	full-time equivalent								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-	-	-	-
Children's Services	-	-	-	-	-	-	-	-	-
Community Development	-	-	-	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-
Environment	-	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-	-
Gaming	-	-	-	-	-	-	-	-	-
Health and Wellness	-	-	-	-	-	-	-	-	-
Human Resources and Employment	-	-	-	-	-	-	-	-	-
Innovation and Science: Alberta Science and Research Authority	-	-	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-	-
Seniors	-	-	-	-	-	-	-	-	-
Solicitor General	-	-	-	-	-	-	-	-	-
Sustainable Resource Development	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	-	-	-	-

**TABLE 57. Continued Personnel engaged in social sciences and humanities activities, by department or agency and activities, 2004-2005**

Department or agency	Related scientific activities (RSA)									Total scientific personnel								
	Intramural			Administration of extramural			Total			Intramural			Administration of extramural			Total		
	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other	S &P <sup>1</sup>	Technical	Other
	full-time equivalent																	
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Children's Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Community Development	7	-	-	-	-	-	7	-	-	7	-	-	-	-	-	7	-	-
Economic Development	-	-	-	6	-	-	6	-	-	-	-	-	6	-	-	6	-	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Environment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finance	5	1	1	-	-	-	5	1	1	5	1	1	-	-	-	5	1	1
Gaming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Health and Wellness	17	6	3	-	-	-	17	6	3	17	6	3	-	-	-	17	6	3
Human Resources and Employment	6	-	-	9	-	-	15	-	-	6	-	-	9	-	-	15	-	-
Innovation and Science: Alberta Science and Research Authority	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	1	-	-
Justice	8	-	-	-	-	-	8	-	-	8	-	-	-	-	-	8	-	-
Seniors	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solicitor General	2	-	-	-	-	-	2	-	-	2	-	-	-	-	-	2	-	-
Sustainable Resource Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>45</b>	<b>7</b>	<b>4</b>	<b>16</b>	<b>-</b>	<b>-</b>	<b>61</b>	<b>7</b>	<b>4</b>	<b>45</b>	<b>7</b>	<b>4</b>	<b>16</b>	<b>-</b>	<b>-</b>	<b>61</b>	<b>7</b>	<b>4</b>

**TABLE 58. Objectives of expenditures in the social sciences and humanities, by department or agency, 2004-2005**

Department or agency	Exploration and utilization of the earth	Infrastructure and general planning of land use			Pollution and protection of the environment	Public health	Production distribution and rational utilization of energy	Agriculture production and technology
		Transport	Telecommunication	other				
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-	-	-
Children's Services	-	-	-	-	-	-	-	-
Community Development	-	-	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	227	-
Environment	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-
Gaming	-	-	-	-	-	-	-	-
Health and Wellness	-	-	-	-	-	19,694	-	-
Human Resources and Employment	-	-	-	-	-	-	-	-
Innovation and Science: Alberta Science and Research Authority	-	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-
Seniors	-	-	-	-	-	-	-	-
Solicitor General	-	-	-	-	-	-	-	-
Sustainable Resource Development	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	<b>19,694</b>	<b>227</b>	-

**TABLE 58. Continued Objectives of expenditures in the social sciences and humanities, by department or agency, 2004-2005**

Department or agency	Fishing	Forestry	Industrial production & technology	Social development	Exploration & exploitation of space	Basic research	Other civil research	Total
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	126	-	-	-	126
Advanced Education	-	-	-	657	-	-	-	657
Children's Services	-	-	-	1,979	-	-	-	1,979
Community Development	-	-	-	500	-	-	-	500
Economic Development	-	-	720	-	-	-	355	1,075
Education	-	-	-	493	-	-	-	493
Energy	-	-	-	-	-	-	-	227
Environment	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	570	-	570
Gaming	-	-	-	1,560	-	-	-	1,560
Health and Wellness	-	-	-	-	-	-	-	19,694
Human Resources and Employment	-	-	-	2,011	-	-	-	2,011
Innovation and Science: Alberta Science and Research Authority	-	-	-	-	-	1,440	-	1,440
Justice	-	-	-	1,423	-	-	-	1,423
Seniors	-	-	-	613	-	-	-	613
Solicitor General	-	-	-	202	-	-	-	202
Sustainable Resource Development	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	<b>720</b>	<b>9,564</b>	-	<b>2,010</b>	<b>355</b>	<b>32,570</b>

**TABLE 59. Objectives of expenditures in the social sciences and humanities by activity, 2004-2005**

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Exploration and utilization of the earth	-	-	-	-	-
Infrastructure and general planning of land use					
Transport	-	-	-	-	-
Telecommunication	-	-	-	-	-
Other	-	-	-	-	-
Pollution and protection of the environment	-	-	-	-	-
Public health	-	2,201	8,454	9,039	<b>19,694</b>
Production, distribution and rational utilization of energy	-	-	-	227	<b>227</b>
Agriculture production and technology	-	-	-	-	-
Fishing	-	-	-	-	-
Forestry	-	-	-	-	-
Industrial production and technology	-	375	-	345	<b>720</b>
Social development	-	3,798	2,988	2,778	<b>9,564</b>
Exploration and exploitation of space	-	-	-	-	-
Basic research	-	540	-	1,470	<b>2,010</b>
Other civil research	-	-	-	355	<b>355</b>
<b>Total</b>	-	<b>6,914</b>	<b>11,442</b>	<b>14,214</b>	<b>32,570</b>

**TABLE 60. Total expenditures in the social sciences and humanities, by activity and performing sector, 2005-2006 estimates**

Activity	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
<b>Research and development (R&amp;D)</b>						
Current expenditures:						
In-house R&D	-	...	...	...	...	-
R&D contracts	-	-	-	-	-	-
R&D grants and contributions	...	2,000	2,012	5,635	5,446	<b>15,093</b>
Research fellowships	-	-	-	-	-	-
Admin of extramural R&D Programs	-	...	...	...	...	-
<i>Sub-total current R&amp;D</i>	-	<i>2,000</i>	<i>2,012</i>	<i>5,635</i>	<i>5,446</i>	<i>15,093</i>
Capital expenditures	-	...	...	...	...	-
<b>Total R&amp;D</b>	-	<b>2,000</b>	<b>2,012</b>	<b>5,635</b>	<b>5,446</b>	<b>15,093</b>
<b>Related scientific activities (RSA)</b>						
Current expenditures	3,768	2,061	6,898	-	10,384	<b>23,111</b>
Admin of extramural RSA programs	2,302	...	...	...	...	<i>2,302</i>
Sub-total current RSA	<i>6,070</i>	<i>2,061</i>	<i>6,898</i>	-	<i>10,384</i>	<i>25,413</i>
Capital expenditures	20	...	...	...	...	<b>20</b>
<b>Total RSA</b>	<b>6,090</b>	<b>2,061</b>	<b>6,898</b>	-	<b>10,384</b>	<b>25,433</b>
<b>Total</b>	<b>6,090</b>	<b>4,061</b>	<b>8,910</b>	<b>5,635</b>	<b>15,830</b>	<b>40,526</b>

**TABLE 61. Total expenditures in the social sciences and humanities, by department or agency and performing sector, 2005-2006 estimates**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development						
Development	-	-	-	-	100	<b>100</b>
Advanced Education	650	-	-	-	-	<b>650</b>
Children's Services	-	2,445	-	-	-	<b>2,445</b>
Community Development	480	-	-	-	-	<b>480</b>
Economic Development	375	-	-	-	1,054	<b>1,429</b>
Education	396	-	-	-	-	<b>396</b>
Energy	-	183	-	-	-	<b>183</b>
Environment	-	-	-	-	-	-
Finance	430	60	-	-	-	<b>490</b>
Gaming	-	-	1,500	-	60	<b>1,560</b>
Health and Wellness	2,496	-	6,960	5,635	13,889	<b>28,980</b>
Human Resources and Employment	855	950	-	-	-	<b>1,805</b>
Innovation and Science:						
Alberta Science and Research Authority	50	-	118	-	727	<b>895</b>
Justice	208	-	320	-	-	<b>528</b>
Seniors	3	423	12	-	-	<b>438</b>
Solicitor General	147	-	-	-	-	<b>147</b>
Sustainable Resource Development	-	-	-	-	-	-
<b>Total</b>	<b>6,090</b>	<b>4,061</b>	<b>8,910</b>	<b>5,635</b>	<b>15,830</b>	<b>40,526</b>



**TABLE 62. Total expenditures in the social sciences and humanities, by department or agency and activity, 2005-2006 estimates**

Department or agency	Research and development			Related scientific activities			Total
	Current	AEP <sup>1</sup>	Capital	Current	AEP <sup>1</sup>	Capital	
in thousands of dollars							
Aboriginal Affairs and Northern Development	-	-	-	100	-	-	100
Advanced education	-	-	-	650	-	-	650
Children's Services	2,000	-	-	445	-	-	2,445
Community Development	-	-	-	480	-	-	480
Economic Development	-	-	-	1,054	375	-	1,429
Education	-	-	-	396	-	-	396
Energy	-	-	-	183	-	-	183
Environment	-	-	-	-	-	-	-
Finance	-	-	-	470	-	20	490
Gaming	1,560	-	-	-	-	-	1,560
Health and Wellness	11,521	-	-	16,041	1,418	-	28,980
Human Resources and Employment	-	-	-	1,349	456	-	1,805
Innovation and Science:							
Alberta Science and Research Authority	-	-	-	845	50	-	895
Justice	-	-	-	528	-	-	528
Seniors	12	-	-	423	3	-	438
Solicitor General	-	-	-	147	-	-	147
Sustainable Resource Development	-	-	-	-	-	-	-
<b>Total</b>	<b>15,093</b>	<b>-</b>	<b>-</b>	<b>23,111</b>	<b>2,302</b>	<b>20</b>	<b>40,526</b>

1. Administration of extramural programs

**TABLE 63. Total expenditures on R&D in the social sciences and humanities, by department or agency and performing sector, 2005-2006 estimates**

Department or agency	Intramural	Business enterprises	Higher education	Hospitals and health organizations	Other	Total
in thousands of dollars						
Aboriginal Affairs and Northern Development	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-
Children's Services	-	2,000	-	-	-	2,000
Community Development	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-
Education	-	-	-	-	-	-
Energy	-	-	-	-	-	-
Environment	-	-	-	-	-	-
Finance	-	-	-	-	-	-
Gaming	-	-	1,500	-	60	1,560
Health and Wellness	-	-	500	5,635	5,386	11,521
Human Resources and Employment	-	-	-	-	-	-
Innovation and Science:						
Alberta Science and Research Authority	-	-	-	-	-	-
Justice	-	-	-	-	-	-
Seniors	-	-	12	-	-	12
Solicitor General	-	-	-	-	-	-
Sustainable Resource Development	-	-	-	-	-	-
<b>Total</b>	<b>-</b>	<b>2,000</b>	<b>2,012</b>	<b>5,635</b>	<b>5,446</b>	<b>15,093</b>

**TABLE 64. Personnel engaged in social sciences and humanities activities, by department or agency and activities, 2005-2006 estimates**

Department or agency	Research and development (R&D)								
	Intramural			Administration of extramural			Total		
	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other
	full-time equivalent								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-	-	-	-
Children's Services	-	-	-	-	-	-	-	-	-
Community Development	-	-	-	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-
Environment	-	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-	-
Gaming	-	-	-	-	-	-	-	-	-
Health and Wellness	-	-	-	-	-	-	-	-	-
Human Resources and Employment	-	-	-	-	-	-	-	-	-
Innovation and Science:	-	-	-	-	-	-	-	-	-
Alberta Science and Research Authority	-	-	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-	-
Seniors	-	-	-	-	-	-	-	-	-
Solicitor General	-	-	-	-	-	-	-	-	-
Sustainable Resource Development	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	-	-	-	-

**TABLE 64. Continued Personnel engaged in social sciences and humanities activities, by department or agency and activities, 2005-2006 estimates**

Department or agency	Related scientific activities (RSA)									Total scientific personnel								
	Intramural			Administra- tion of extramural			Total			Intramural			Administra- tion of extramural			Total		
	S & P	Technical	Other	S & P	Technical	Other	S & P	Technical	Other	S & P	Technical	Other	S & P	Technical	Other	S & P	Technical	Other
	full-time equivalent																	
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Children's Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Community Development	7	-	-	-	-	-	7	-	-	7	-	-	-	-	-	7	-	-
Economic Development	-	-	-	6	-	-	6	-	-	-	-	-	6	-	-	6	-	-
Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Environment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finance	5	1	1	-	-	-	5	1	1	5	1	1	-	-	-	5	1	1
Gaming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Health and Wellness	17	6	3	-	-	-	17	6	3	17	6	3	-	-	-	17	6	3
Human Resources and Employment	7	-	-	8	-	-	15	-	-	7	-	-	8	-	-	15	-	-
Innovation and Science: Alberta Science and Research Authority	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	1	-	-
Justice	9	-	-	-	-	-	9	-	-	9	-	-	-	-	-	9	-	-
Seniors	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solicitor General	2	-	-	-	-	-	2	-	-	2	-	-	-	-	-	2	-	-
Sustainable Resource Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>47</b>	<b>7</b>	<b>4</b>	<b>15</b>	<b>-</b>	<b>-</b>	<b>62</b>	<b>7</b>	<b>4</b>	<b>47</b>	<b>7</b>	<b>4</b>	<b>15</b>	<b>-</b>	<b>-</b>	<b>62</b>	<b>7</b>	<b>4</b>

Department or agency	Exploration and utilization of the earth	Infrastructure and general planning of land use			Pollution and protection of the environment	Public health	Production distribution and rational utilization of energy	Agriculture production and technology
		Transport	Telecommunication	other				
in thousands of dollars								
Aboriginal Affairs and Northern Development	-	-	-	-	-	-	-	-
Advanced Education	-	-	-	-	-	-	-	-
Children's Services	-	-	-	-	-	-	-	-
Community Development	-	-	-	-	-	-	-	-
Economic Development	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	183	-
Environment	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-
Gaming	-	-	-	-	-	-	-	-
Health and Wellness	-	-	-	-	-	28,980	-	-
Human Resources and Employment	-	-	-	-	-	-	-	-
Innovation and Science:								
Alberta Science and Research Authority	-	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-
Seniors	-	-	-	-	-	-	-	-
Solicitor General	-	-	-	-	-	-	-	-
Sustainable Resource Development	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	<b>28,980</b>	<b>183</b>	-

Department or agency	Fishing	Forestry	Industrial production & technology	Social development	Exploration & exploitation of space	Basic research	Other civil research	Total
Aboriginal Affairs and Northern Development	-	-	-	100	-	-	-	<b>100</b>
Advanced Education	-	-	-	650	-	-	-	<b>650</b>
Children's Services	-	-	-	2,445	-	-	-	<b>2,445</b>
Community Development	-	-	-	480	-	-	-	<b>480</b>
Economic Development	-	-	605	-	-	-	824	<b>1,429</b>
Education	-	-	-	396	-	-	-	<b>396</b>
Energy	-	-	-	-	-	-	-	<b>183</b>
Environment	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	490	-	<b>490</b>
Gaming	-	-	-	1,560	-	-	-	<b>1,560</b>
Health and Wellness	-	-	-	-	-	-	-	<b>28,980</b>
Human Resources and Employment	-	-	-	1,805	-	-	-	<b>1,805</b>
Innovation and Science:								...
Alberta Science and Research Authority	-	-	-	-	-	895	-	<b>895</b>
Justice	-	-	-	528	-	-	-	<b>528</b>
Seniors	-	-	-	438	-	-	-	<b>438</b>
Solicitor General	-	-	-	147	-	-	-	<b>147</b>
Sustainable Resource Development	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	<b>605</b>	<b>8,549</b>	-	<b>1,385</b>	<b>824</b>	<b>40,526</b>

**TABLE 66. Objectives of expenditures in the social sciences and humanities, by activity, 2005-2006 estimates**

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Exploration and utilization of the earth	-	-	-	-	-
Infrastructure and general planning of land use					
Transport	-	-	-	-	-
Telecommunication	-	-	-	-	-
Other	-	-	-	-	-
Pollution and protection of the environment	-	-	-	-	-
Public health	-	2,496	11,521	14,963	<b>28,980</b>
Production, distribution and rational utilization of energy	-	-	-	183	<b>183</b>
Agriculture production and technology	-	-	-	-	-
Fishing	-	-	-	-	-
Forestry	-	-	-	-	-
Industrial production and technology	-	375	-	230	<b>605</b>
Social development	-	2,739	3,572	2,238	<b>8,549</b>
Exploration and exploitation of space	-	-	-	-	-
Basic research	-	480	-	905	<b>1,385</b>
Other civil research	-	-	-	824	<b>824</b>
<b>Total</b>	-	<b>6,090</b>	<b>15,093</b>	<b>19,343</b>	<b>40,526</b>

## THE RESPONDENTS

The following government departments and agencies are currently involved in scientific activities in Alberta. The person listed co-ordinated the reporting of expenditures in the department or agency. We wish to thank the co-ordinators, as well as those assisting in the amalgamation of data, for their time and efforts in providing us with these statistics.

### Aboriginal Affairs and Northern Development

Co-ordinator: Hamblin Beharry

Tel: (780) 427-9396

Fax: (780) 427-4019

The ministry hires contractors and participates in joint related research activities to support business plan goals.

Aboriginal Affairs and Northern Development:

**Vision:** An Alberta that includes the full participation of self-reliant Aboriginal and Northern Albertans in the province's opportunities and prosperity.

**Mission:** Through collaboration with other ministries, Aboriginal governments and organizations and other partners, develop and promote strategies and initiatives to enhance Aboriginal well-being and self-reliance, clarify government and Aboriginal roles and responsibilities, and enhance the economic and social development of northern Alberta.

Aboriginal Affairs and Northern Development has two core businesses:

- 1) Encourage increased Aboriginal participation in the social and economic life of Alberta and facilitate the resolution of significant Aboriginal issues.
- 2) To advance the development of Northern Alberta

### Advanced Education

Co-ordinator: Mike Lam

Tel: (780) 427-8505

Fax: (780) 422-3014

With respect to scientific activities in the social sciences and humanities, Alberta Advanced Education conducts a wide range of research into issues affecting the learning system, including the following:

- Research to assess and improve student learning and the education system generally.
- Research on the quality of programs offered by institutions and enrolment pressures on the system such as the Graduate Outcomes and Employment Survey, Knowledge Management Framework.
- Research on the effectiveness of the learning system and assess the level of satisfaction with the education system, such as the Survey of Parents, Public and Learners, Student Funding Satisfaction Survey, Student and Parent Financial Survey, and Performance Measures for Divisional core functions, and Annual Report Item Management System Enhancements.
- Evaluate the Apprenticeship and Industry Training System such as the Survey of Graduates of the Apprenticeship System, and Surveys of the Boilermaker, Ironworker and Steamfitter-Pipefitter Trades Concerning Ratios.
- Research on the status of internalization in Alberta.
- Research on transitions into and out of the learning system and on educational and labour market outcomes of students and graduates.

## THE RESPONDENTS cont.

### Agriculture, Food and Rural Development

Co-ordinator: Mafiz Khan

Tel: (780) 422-6573

Fax: (780) 427-3005

Alberta Agriculture, Food and Rural Development (AAFRD) has four closely integrated research programs: processing development, crop development, livestock development and environmental stewardship research. The programs are very much interdependent and reflect the structure of the food production system. Environmental resources (soil, water, air, solar energy and biodiversity) provide the foundation for the production of crops and livestock.

The processing sector transforms and adds value to crop and livestock products. The research results contribute to the building of an environmentally sustainable agriculture industry that produces the finest quality of food and non-food products for Albertans, Canadians and global consumers.

The projects carried out under the various programs are as follows:

Processing development program contributed to:

- New crop and meat products and processes development,
- Fractionation of crop ingredients for promoting human health and feed manufacturing, and
- Possible use of agri-fibres and lignin's for the production of bio-composites and plastics.

The focus of livestock development research was on:

- Improving meat safety and enriching quality,
- Improving production efficiency and product quality,
- Enhancing feeding efficiency,
- Exploring ways for humane treatment of animals and safe disposal of specified risk materials and mortalities.

The crop development research was geared towards:

- Developing new varieties, increasing yield and production efficiency;
- Enhancing disease resistance and control diseases,
- Developing crops with additional health benefit and industrial use,
- Safe use of crops as platforms for production of higher value components.

The environmental stewardship research concentrated on determining agriculture's impact on:

- Soil, air and water quality and developing technologies to minimize them.

## THE RESPONDENTS cont.

### Children's Services

Co-ordinator: Sherry Thompson

Tel: (780) 427-7748

Fax: (780) 427-2176

1. The major area of research investment by Alberta Children's Services was in the Alberta Centre for Child, Family, and Community Research. The mission of this Research Centre is to develop, support, and integrate research across sectors and disciplines to provide a strong, evidence-based foundation for identifying and promoting effective public policy and service delivery to improve the well-being of Alberta's children, families and communities. By investing in research, Children's Services is investing in the knowledge that we need, to assure the quality of our programs and services, and to promote continuous improvement.
2. Research grant to study the effectiveness of interventions to prevent Fetal Alcohol Spectrum Disorders (FASD).
3. Start-up funding for Phase 1 of a cross-jurisdictional research network on Fetal Alcohol Spectrum Disorders (FASD).
4. Contract on the Child Welfare National Outcomes to engage and train agency staff and collect outcomes data for Alberta.
5. To evaluate the implementation of the differential response, permanency planning, and community engagement components of the Alberta Response Model and establish quantitative baselines for Ministry practices in these areas.
6. Research projects on Building Child and Family Resiliency as families move from homelessness to community participation.
7. Evaluation of the Southern Alberta Child and Youth Health Network.

### Community Development

Co-ordinator: Ian McKinley

Tel: (780) 427-7828

Fax: (780) 422-3142

In 2004-2005, Cultural Facilities and Historical Resources Division reports natural science expenditures in museum services. The Division operates a number of major provincial heritage facilities including museums, historic sites, interpretative centres, provincial parks and protected areas.

### Economic Development

Co-ordinator: Kathy Dumaresq

Tel: (780) 422-1157

Fax: (780) 422-0061

This department reported all expenditures in the social sciences under related scientific activities. Economic Development's mission is to promote Alberta's continuing prosperity. Economic Development has many partnerships for example, Statistics Canada Canadian Travel Survey, In-Province Travel Behaviour Study, studies done in partnership with Canadian Tourism Commission and the study on agri-tourism in partnership.



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## THE RESPONDENTS cont.

### Education

Co-ordinator: Greg Rudolf

Tel: (780) 415-9839

Fax: (780) 422-0880

With respect to scientific activities in the social sciences and humanities, Alberta Education conducts a wide range of research into issues affecting the K-12 education system, including the following:

- Research to assess and improve student learning and the education system generally
- Research on the quality of programs offered by institutions and enrolment pressures on the system such as the Knowledge Management Framework.
- Research on the effectiveness of and level of satisfaction with the education system, such as the Survey of Parents, Public and Learners,
- Performance Measures for Divisional core functions, and Annual Report Item Management System Enhancements.

### Energy

Co-ordinator: Ida Meanwell

Tel: (780) 422-9115

Fax: (780) 422-0692

As part of the Energy Innovation Strategy, Alberta Energy created the Innovative Energy Technologies Program (IETP). The IETP represents a \$200 million commitment over five years by Alberta Energy to provide royalty adjustments to a number of specific pilot and demonstration projects that use innovative technologies to increase recoveries from existing reserves and encourage responsible development of oil, natural gas and in-situ oil sands reserves. The program is also designed to assist industry to find commercial technical solutions to the gas over bitumen issue that will allow efficient and orderly production of both resources.

The objective is to generate royalties from the increased recovery of oil, gas and oil sands resources might not otherwise be recovered under present technology. It's anticipated that successful technologies supported by this program will enhance resource recovery and increase royalties to fully recover, over time, program's costs.

Successful applicants in the program will be provided royalty adjustment of up to a maximum of 30 per cent of approved project costs. Industry must provide the remaining 70 per cent or more of total project costs. The total industry / government commitment to important new technologies, assuming full subscription of the program, will be at least \$667 million.

## Environment

Co-ordinator: Richard Dixon

Tel: (780) 427-2149

Fax: (780) 422-5136

Environmental monitoring of water management structures in southern Alberta - Oldman River Dam, Pine Coulee Project, Twin Valley Project Remote sensing methods for air quality Improved source monitoring methods for air quality particularly mercury CEMs.

Effects of climate change in Alberta including water, ecosystems and impacts on economy

CBM development (groundwater contamination, aquifer depletion, uses of produced water, structural/geological impacts, methane migration)

Drinking water safety (improved treatment technologies for removing pathogens and contaminants)

Selenium in coal mines

Assessment criteria for natural regeneration potential

Field assessment of drilling waste disposal and stratified hydrocarbon remediation areas

Evaluation of long-term soil acidification monitoring data (esp. Ft. McMurray installation)

Assessment and remediation of salt affected landscapes

Groundwater remediation technologies

Oilfield injection (alternate methods for enhanced recovery)

Decision support tools for water management (drought & flood forecasting, supply & demand management)

Tools and methods to assess aquatic ecosystem health (comprehensive in-stream flow needs models, cumulative effects assessment models)

## Finance

Co-ordinator: Bill Hyshka

Tel: (780)427-8854

Fax: (780) 427-0409

Intramural activities consist of the development of socio-economic data on the province of Alberta through a coordinated survey and research program which includes but not limited to: Alberta spatial price survey, Alberta wage and salary survey, Alberta population projection model, Alberta economic impact model, Alberta economic multipliers, etc.

The development and enhancement of an online statistical information system, is to provide research data to both public and private sector entities for policy, planning and business market purposes

## Gaming

Co-ordinator: Kent Verlik

Tel: (780) 447-8813

Fax: (780) 447-8800

The Alberta Gaming Research Council (AGRC) is a broad-based advisory group to the Minister of Gaming that meets to discuss gaming research topics of interest and to monitor the activities of the Alberta Gaming Research Institute (AGRI). The AGRC also identifies research priorities and subsequently directs AGRI to investigate those priorities.

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## THE RESPONDENTS cont.

### Health and Wellness

Co-ordinator: Sylvia Wilson

Tel: (780) 427-0407

Fax: (780) 422-2880

- The intramural related scientific activities (RSA) of Health and Wellness are extensive across divisions and branches (i.e., surveillance, health workforce measurement, pharmaceutical, etc.) All supported extramural activities require engagement in a level of intramural RSA dependent on the nature of the collaborations, etc

Here are a few descriptions of extramural activities

- Centre for Toxicology
  - Research related to environmental testing, biological monitoring of exposure to pollutants, drug of abuse testing.
- Alberta Heritage Foundation for Medical Research
  - Generation of applied health services research in the province.
- Institute of Health Economics
  - A unique partnership of the Government of Alberta, major academic centres in Alberta and the pharmaceutical industry.
  - Produce relevant, quality research and research methodologies.
  - Research themes include health economics, health outcomes and policy research.
- Western Canada Waiting List
  - Partnership of medical associations, ministries of health, regional health authorities, and health research centers to study access to appropriate and effective healthcare.
- Toward Optimized Practice
  - Health quality improvement initiative fostering the use of evidence-based best practices and quality initiatives in medical care in Alberta.

## THE RESPONDENTS cont.

### Human Resources and Employment

Co-ordinator: Frank Testin

Tel: (780) 415-0564

Fax: (780) 422-5070

#### Intramural activities:

Data Development and Evaluation such as:

- Developed a logic model and performance measures for the Alberta Child Health Benefit and Alberta Adult Health Benefit which are required for follow-up evaluations.
- Analyzed Alberta Workers' Compensation Board lost-time claim (LTC) data and LTC rate (where available) by part of body injured, nature and source of injury, worker age and gender, size of employer, industry and other variables of interest.
- Analyzed client follow-up information gathered in telephone surveys of Aboriginal and immigrant clients who had left several AHRE employment/training programs.
- Obtained the views of clients who had obtained services from Mediation Services.
- Gathered feedback from clients of the Student Funding Contact Centre on several aspects of service.
- Updated profiles of special groups (e.g. youth, older workers, Aboriginals, persons with disabilities and immigrants) in Alberta's labour force.
- Based on the Canadian Occupational Projection System (COPS) forecast produced by HRSDC and with additional information on the Alberta economy, an interdepartmental committee refined occupational projections for some 500 NOC occupations and 33 SIC industries.

#### Extramural activities:

- Alberta Child Health Benefit (ACHB) Survey (HarGroup Management Consultants) - gathered comprehensive feedback from registrants in the ACHB program.
- Labour Market Information (LMIC) Centre Client Survey (Research Innovations) – gathered clients' views on the usefulness of various information and services, and their satisfaction with various aspects of service.
- Employment Insurance (EI) Funded Learner Review (R. A. Malatest & Associates) – on the basis of client follow-up data collected in telephone surveys, interviews with stakeholders and a literature review of programs in other jurisdictions, developed suggestions on program enhancements that may better meet clients' needs.
- Evaluability Assessment for linkAlberta.info (Howard Research & Management Consulting) – with input from key stakeholders, re-examined the initiative's logic model and objectives, identified key evaluation questions, identified any gaps in information systems, and presented options for evaluating the initiative.
- Evaluation Framework for Costs and Benefits of AHRE Employment and Training Programs (Applications Management) - developed a framework to evaluate the costs and benefits of AHRE employment and training programs.
- Job Order Bank Services (JOBS) Client Survey (HarGroup Management Consultants) - gathered extensive feedback from employers who used the service.
- Work Outcomes Reporting Project (R.A. Malatest & Associates) - gathered outcome information (eg. work/education outcomes, and community involvement and client satisfaction) of former clients in selected AHRE services/programs.
- Alberta Wage and Salary Survey (R.A. Malatest & Associates) - gathered information on wages and salaries for full-time and part-time employees in Alberta by occupation, geographic area, industry group and firm size.
- Labour Supply Model (Centre for Spatial Economics) - completed several steps to build a model which can forecast the supply of labour for Alberta's economy.

## THE RESPONDENTS cont.

### Infrastructure and Transportation

Co-ordinator: Peter Ing

Tel: (780) 415-1009

Fax: (780) 422-5426

The department of Infrastructure reports expenditures in the natural sciences. All of their scientific activities were reported by the technical services branch. Capital grants is to fund agencies and capital expenditures on behalf of other departments for land, buildings, furnishings and equipment covering the construction, upgrading or major maintenance of facilities with a major research focus.

#### R&D:

Climate Change Strategy; CTA Review; Alternative service delivery

Road Safety related research

RWIS R&amp;D

ATIS

ITS Studies

Traffic Safety Data

#### RSA:

Surface condition rating; appertenance surveys

Statistical analysis of collisions/ business analysis of safety aspects of motor transport &amp; carrier industry

Technical economic studies related to safety policy development and highway user safety industry

Facility planning studies

Facility evaluations of schools &amp; other owned facilities

### Innovation and Science

Due to the magnitude of scientific activities reported under Innovation and Science, this report will show activities detail at the agency level:

### Alberta Science and Research Authority

Co-ordinator: Kate Murie

Tel: (780) 422-0158

Fax: (780) 427-1430

Within the Alberta Science and Research Authority (ASRA), the University Research and Strategic Investments (URSI) Branch is responsible for administering the Alberta Science and Research Investments Program (ASRIP) and the Strategic Research Investments (SRI) Program.

ASRA reports all their expenditures in R&D in both sciences at \$42 million for 2004-2005. ASRIP is a competitive funding program that supports selected science and research initiatives of strategic importance to Alberta in the priority areas of life sciences, energy and information and communications technology. There are 2 funding streams within ASRIP, each supporting distinct types of research activities:

- RI (Research Infrastructure) is designed to increase the research excellence and competitiveness of Alberta Universities and research hospitals by investing in their research infrastructure to enhance the capacity and capability of Alberta's research system in areas of strategic priority. This stream is also intended to help Alberta universities attract and retain high quality faculty and graduate students, encourage the development of institutional and collaborative centres of excellence, and leverage funding from the Canada Foundation for Innovation and other sources.

## **THE RESPONDENTS cont.**

### **Innovation and Science (cont.)**

#### **Alberta Science and Research Authority (Cont.)**

Co-ordinator: Kate Murie

Tel: (780) 422-0158

Fax: (780) 427-1430

- ERATT (Enabling Research Application and Technology Transfer) supports linkages, infrastructure and networks directly related to research application and technology transfer to help build a coherent technology commercialization network, strengthen partnerships between research organizations and industry, and enhance Alberta's capacity to capitalize on the benefits of research.

The Strategic Research Investments Program: is designed to support specific strategic initiatives that contribute to building platform technologies and critical mass in areas of emerging importance to Alberta such as nanotechnology.

#### **Alberta Agricultural Research Institute**

Co-ordinator: Freda Molenkamp

Tel: (780) 422-6570

Fax: (780) 427-3252

The Alberta Agricultural Research Institute is an Institute established under the Alberta Science and Research Authority Act. AARI's mission is to enhance the contribution of the agricultural research and technology development system to a sustainable agriculture and food industry in Alberta.

AARI's core Businesses includes the following:

1. Lead and facilitate the development of a strategic agricultural R&D system
2. Manage and fund a portfolio of strategic, high quality agricultural R&D investments
3. Lead and facilitate the development of strategic alliances and partnerships among agricultural R&D funders, partners and industry.

AARI reports expenditures in the natural sciences totalling \$8 million.

## THE RESPONDENTS cont.

### Innovation and Science (cont.)

#### Alberta Energy Research Institute

Co-ordinator: Alice Hedges

Tel: (403) 297-8650

Fax: (403) 297-3638

The Alberta Energy Research Institute is an Institute established under the Alberta Science and Research Authority Act that works to promote and fund energy research in Alberta.

AERI works with the Departments of Energy, Economic Development, Environment and Sustainable Resource Development to ensure that research relevant to Alberta is undertaken in a fiscally responsible manner. AERI funds research in any area of energy which is of importance to the province.

AERI works with universities, industry, and other research providers to ensure quality research is undertaken.

AERI's primary functions include:

**Leadership:** to encourage and advance the development of new energy technologies of strategic importance to Alberta

**Advocacy:** work collaboratively to help fulfill the goals of other Government of Alberta (GOA) departments, such as Energy and Environment

**Strategic Investment:** centrally manage strategic investments in energy research and innovation on behalf of all GOA departments

AERI does not conduct intramural research. It provides funding assistance for extramural energy research and innovation.

AERI also funds feasibility studies and participates in collaborative work to improve research and development in the energy industry. AERI works closely with the Alberta Department of Energy, Alberta Environment, and Alberta Economic Development, industry, academia and the federal government.

AERI has launched a Canada-wide Energy Innovation Network (EnergyINet), a virtual network of governments, industry, and academia and research providers to collaborate on energy research. EnergyINet's vision is to develop an abundant supply of environmentally responsible energy, creating economic prosperity and social well-being for Canadians.

EnergyINet will support innovation efforts in six major program areas: Bitumen Upgrading, Improved Recovery, Water Management, CO2 Management, Alternate and Renewable Energy, and Clean Coal/Carbon. Each Innovation Program will develop a research business plan designed to reach the long term goals that are set by the Board of Directors.

Information on the AERI mandate and priorities is available at [www.aeri.ab.ca](http://www.aeri.ab.ca) and on EnergyINet is available at [www.energyinet.com](http://www.energyinet.com).

## **THE RESPONDENTS cont.**

### **Innovation and Science cont.**

#### **Alberta Forestry Research Institute**

Co-ordinator: Ted Szabo

Tel: (780) 422-8870

Fax: (780) 427-0821

The Alberta Forestry Research Institute is an Institute established under the Alberta Science and Research Authority Act, which works to promote and support forestry research. All funding activities are research and development of which over 53% of funding goes to higher education.

#### **Alberta Research Council Inc.**

Co-ordinator: Stephen Moran

Tel: (780) 450-5258

Fax: (780) 450-1490

The Alberta Research Council Inc is the largest supporter of natural sciences expenditures totaling of \$81.7 million and an estimated \$88.3 million for 2005-2006.

ARC performs applied R&D on a contract or fee basis and co-venture with others to develop new technologies, deriving a return on investment from the commercialization of new products and services.

#### **iCORE ( informatics Circle of Research Excellence)**

Co-ordinator: Lynn Sutherland

Tel: (403) 210-5335

Fax: (403) 210-5337

iCORE funds University-based research in Information and Communications Technologies at the Universities in Alberta, primarily in the departments of Computer Science, Electrical and Computer Engineering, Math and Physics. iCORE administers granting programs for Research Chairs and Graduate Students. iCORE, while fairly new is showing good growth in R&D scientific activities.

#### **Alberta Heritage Foundation for Medical Research**

Co-ordinator: Jacques Magnan

Tel: (780) 423-5727

Fax: (780) 429-3509

The majority of Alberta Heritage Foundation for Medical Research (AHFMR) annual investment in health research stems from the interest from an endowment fund established by the Alberta government under the *Alberta Heritage Foundation for Medical Research Act*.

All activities are in support of R&D in the natural sciences with 90% supporting research in the higher education sector, and the remainder being used to administer those extramural grants. Alberta Heritage Foundation for Medical Research reports expenditures of \$498.9 million for 2004-2005, not including the contribution from AHW.

Health Technology Assessment (HTA) evaluates the properties and effects of health care technology and provides information to support all health care decisions at local, regional, national and international levels. Applied Health Research Programs (AHRP) provides a locus for proactive research capacity development through networking and partnerships to promote a culture of evidence based health-care in Alberta. AHRP facilitates nurtures, enables and supports research, networks, and partnerships between AHFMR and the various sectors in the health services sector, including the Alberta Health Authorities and Health and Wellness. The Impact Analysis Unit (IA) provides relevant, timely and longitudinal measures of the AHFMR's impact on the discovery of new knowledge, the health of Albertans, and quality of health services in Alberta. At the same time, IA develops new knowledge which is valued and applied by AHFMR and the Foundation's stakeholders.



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## THE RESPONDENTS cont.

### Innovation and Science cont.

#### Alberta Ingenuity Fund

Co-ordinator: Brian Alguire

Tel: (780) 429-7665

Fax: (780) 420-0018

Alberta Ingenuity Fund – The trade name for Alberta Heritage Foundation for Science and Engineering Research – was launched in early 2000. As its name suggests, their goal is to establish and support a balance long-term program of science and engineering research base in Alberta that would improve the quality of the economy, the community and environment. Alberta Ingenuity Fund this year is reporting expenditures of \$16.7 million in 2004-05, an estimated \$22.3 million for 2005-06.

#### How does our endowment fund work?

Our endowment fund works like a trust fund that generates income from the principal. Interest from the endowment is used to support a balanced, long-term program of science and engineering research based in Alberta.

### End of Innovation and Science

#### Justice

Co-ordinator: Stephen Gauk

Tel: (780) 422-2640

Fax: (780) 422-2829

The science expenditures of the Department are in the social science field and are reported by Strategic Management Services, Criminal Justice, Policy Secretariat, Strategic Business Services, Civil Law, Court Services. Intramural activities include public opinion surveys for general research.

Extramural activities with Alberta Law Reform Institute (ALRI), is an independent institute created by agreement, renewed every five years, between the University of Alberta, the Law Society of Alberta and Alberta Justice. The ALRI conducts legal research in order to make recommendations to the provincial government for law reform. Alberta Justice provided the ALRI with a \$320,000 grant.

#### Seniors and Community Support

Co-ordinator: Micheline Charrois

Tel: (780) 644-1216

Fax: (780) 644-5499

The Department of Seniors reports science expenditures in the social sciences. Reported by Strategic Planning and Supportive Living Division, Housing Services Division, Community Support Systems Division and Persons with Developmental Disabilities Provincial Board.

Community Action Coalition Process (Conducted by the Community Support Services Branch): A Participatory Action Research Process involving survivors of acquired brain injury, families/caregivers, and professionals in a nominal group process to capture "real impact scenarios", identify needs/concerns and provide input regarding prioritises for strategic development.

The Housing Services division funds the annual client satisfaction survey as well as the Seniors Impact Study.

## THE RESPONDENTS cont.

### Solicitor General

Co-ordinator: Carolynn Hawryluk

Tel: (780) 415-8333

Fax: (780) 427-2789

The science expenditures of the Department are in the social science field and are reported by Corporate Services, Public Security, and Correctional Services. Intramural activities include research client satisfaction surveys, the provincial RCMP survey, and the costing review of Alberta police.

### Sustainable Resource Development

Co-ordinator: Shanna Niemar

Tel: (780) 427-4655

Fax: (780) 644-4682

Sustainable Resource Development reports in Natural sciences. This year the department is reporting \$24.6 million in expenditures for 2004-2005.

The department's related scientific activities extramural consist of;

#### Land and Forest Division

Waterbody Ownership Assessment  
Management of Riparian Areas (Cows and Fish)  
Development of Technical Guides  
Range Inventory and Monitoring Surveys  
Wood Borer Impact Study  
Forest Pests Survey  
Spruce Budworm Population Dynamics  
Forest Health Annual Report  
Cadastral Mapping Maintenance  
Tree Growth and Yield Research  
Forest Ecology and Science Application  
Tree Improvement Research

#### Forest Protection Division

Silviculture Research  
Fire Regime Analysis  
Fire Growth Modelling (Prometheus)  
Fuel Validation Project  
Lost Creek Fire Research  
Burn P3 Model

#### Strategic Corporate Services

Topographic data collection, and natural resource inventory and data management

#### Fish and Wildlife Division

Wildlife & Fish Species Management  
Habitat Conservation  
Cows and Fish  
West Nile Virus Monitoring  
Chronic Wasting & Other Wildlife Diseases

#### Policy and Planning Division

Tech. Transfer Workshop  
Caribou Scientific Review

#### Strategic Forest Initiatives

Technology Transfer - FERIC  
Value Added Initiative - FORINTEK

#### Human Resources

Education support for staff in Natural Resource Programs of Study

## INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

### 1. Gross Domestic Expenditures on Research and Development (GERD) in Canada, by performing sector, by province, 2003<sup>1</sup>

Provinces	Federal government	Provincial government	Business enterprise	Higher education	Total
in millions of dollars					
Newfoundland and Labrador	23	5	19	114	161
Prince Edward Island	12	-	7	23	42
Nova Scotia	65	6	78	261	410
New Brunswick	30	4	43	117	194
Québec <sup>2</sup>	314	82	4,115	2,345	6,856
Ontario <sup>2</sup>	351	87	7,066	3,196	10,700
Manitoba	63	4	126	250	443
Saskatchewan	54	11	82	244	391
<b>Alberta</b>	87	102	779	853	1,821
British Columbia	80	17	1,075	797	1,969
National Capital Region					
Québec	49	...	...	...	49
Ontario	950	...	...	...	950
<b>Canada<sup>3</sup></b>	<b>2,083</b>	<b>318</b>	<b>13,391</b>	<b>8,200</b>	<b>23,992</b>

### 2. Gross Domestic Expenditures on Research and Development (GERD) in Canada, by funding sector, by province, 2003<sup>1</sup>

Provinces	Federal government	Provincial government	Business enterprise	Higher education	Foreign	Total
in millions of dollars						
Newfoundland and Labrador	60	6	23	68	4	161
Prince Edward Island	20	-	6	23	-	42
Nova Scotia	127	14	72	172	25	410
New Brunswick	61	8	48	75	2	194
Québec <sup>2</sup>	1,047	458	3,701	1,161	489	6,856
Ontario <sup>2</sup>	1,286	457	6,025	1,666	1,266	10,700
Manitoba	132	24	131	146	10	443
Saskatchewan	121	39	88	133	10	391
<b>Alberta</b>	319	268	782	365	87	1,821
British Columbia	334	117	946	403	169	1,969
National Capital Region						
Québec	46	-	3	-	-	49
Ontario	937	1	12	-	-	950
<b>Canada<sup>3</sup></b>	<b>4,495</b>	<b>1,392</b>	<b>11,838</b>	<b>4,205</b>	<b>2,062</b>	<b>23,992</b>

1. *Estimates of Canadian Research and Development Expenditures (GERD)*, Canada 1994 to 2005 preliminary and by Province 1994 to 2003, Science, Innovation and Electronic Information, Division, Statistics Canada, 88-001-XIE Vol. 29 No. 8, (December 2005)
2. Federal Government excludes expenditures performed in the National Capital Region.
3. Includes the Yukon, Northwest Territories and Nunavut

### 3. Provincial indicators

Province	Population 2003 <sup>1</sup>		Provincial gross domestic product per capita 2003 <sup>2</sup> (PGDP)		GERD 2003 <sup>3</sup>		Provincial GERD/PGDP 2003 <sup>3</sup>
	Thousands	rank	Dollars	rank	millions of dollars	rank	ration
Newfoundland and Labrador	518	9	35,002	5	161	9	0.9
Prince Edward Island	137	10	28,066	10	42	10	1.1
Nova Scotia	936	7	30,678	8	410	6	1.4
New Brunswick	751	8	29,533	9	194	8	0.9
Québec*	7,494	2	33,676	6	6,856	2	2.7
Ontario*	12,260	1	40,240	2	10,700	1	2.2
Manitoba	1,162	5	32,460	7	443	5	1.2
Saskatchewan	995	6	36,577	3	391	7	1.1
<b>Alberta</b>	3,160	4	54,169	1	1,821	4	1.1
British Columbia	4,155	3	35,126	4	1,969	3	1.3
<b>Canada</b> <sup>4</sup>	<b>31,669</b>		<b>38,403</b>		<b>23,992</b>		<b>2.0</b>

1. CANSIM, Table 051-0005, Statistics Canada.

2. CANSIM, Table 384-0001, Statistics Canada.

3. Science Statistics, Catalogue no. 88-001-XIE, Vol. 29, No. 8, December 2005.

4. Includes the Yukon, the Northwest Territories and Nunavut.

\* Québec and Ontario GERD figures exclude Federal Government expenditures of \$1,015 million performed in the National Capital Region.

### 4. Federal Government sector

Province	GERD in the Federal Government sector, by Province 2003-2004 <sup>1</sup>		Distribution of Federal Government R&D Personnel, by Province 2003-04 <sup>2</sup>	
			Scientific and Personnel	Total
	in millions of dollars	dollars per capita	Full-time Equivalents	
Newfoundland and Labrador	23	44	65	163
Prince Edward Island	12	88	25	85
Nova Scotia	65	69	207	501
New Brunswick	30	40	55	195
Québec	314	42	954	2,092
Ontario	351	29	1,029	2,102
Manitoba	63	54	190	474
Saskatchewan	54	54	161	417
<b>Alberta</b>	87	28	270	641
British Columbia	80	19	335	589
National Capital Region				
Québec	49	...	169	336
Ontario	950	...	2,629	5955
<b>Canada</b> <sup>3</sup>	<b>2,083</b>	<b>66</b>	<b>6,105</b>	<b>13,585</b>

1. Estimates of Canadian Research and Development Expenditures (GERD), Canada 1994 to 2005 preliminary and by Province 1994 to 2003, Science, Innovation and Electronic Information, Division, Statistics Canada, 88-001-XIE Vol. 29 No. 8, (December 2005) Table 6

2. Provincial distribution of federal expenditures and personnel on science and technology, 1996-97 to 2002-03, table 18.

3. Includes the Yukon, the Northwest Territories and Nunavut

## 5. Provincial governments and provincial research organizations sectors

Province	GERD in the Provincial Governments Sector, by Province, 2003-2004			GERD in the Provincial Research Organizations Sector, by Province, 2003-2004		
	millions of dollars <sup>2</sup>	dollars per capita	R&D Personnel <sup>1</sup>	millions of dollars <sup>2</sup>	dollars per capita	R&D Personnel
Newfoundland and Labrador	5	10	..	..	..	..
Prince Edward Island	-	-	..	..	..	..
Nova Scotia	6	6	..	..	..	..
New Brunswick	2	3	..	2	3	-
Québec	67	9	721	15	2	177
Ontario	87	7	1,040	-	-	..
Manitoba	4	3	48	-	-	-
Saskatchewan	4	4	57	7	7	158
<b>Alberta</b>	102	32	656	-	-	-
British Columbia	17	4	186	-	-	-
<b>Canada<sup>3</sup></b>	<b>294</b>	<b>9</b>	<b>2,708</b>	<b>24</b>	<b>1</b>	<b>364</b>

1. *Scientific and Technological Activities of Provincial Governments 1995-96 to 2003-2004<sup>e</sup>*. Cat. No. 88-F0006-XIE (June 2005) Table 5

2. *Science Statistics*. Catalogue no. 88-001-XIE (PRO)

3. Includes the Yukon, the Northwest Territories and Nunavut.

.. Data not available.

## 6. Business enterprise sector

Province	GERD in the Business Enterprise Sector, by Province, 2003		Distribution of R & D Personnel, 2003 <sup>1</sup>	
	in millions of dollars	dollars per capita	Professionals	Total
Newfoundland and Labrador	19	37	188	296
Prince Edward Island	7	51	66	110
Nova Scotia	78	83	616	962
New Brunswick	43	57	296	540
Québec	4,115	549	22,495	41,227
Ontario	7,066	576	36,898	56,513
Manitoba	126	108	662	1,211
Saskatchewan	82	82	465	944
<b>Alberta</b>	779	247	3,060	4,746
British Columbia	1,075	259	6,050	9,742
<b>Canada<sup>2</sup></b>	<b>13,391</b>	<b>423</b>	<b>70,796</b>	<b>116,293</b>

1. Industrial research and development 2005 intentions cat. 88-202-XIE (January 2005) Table 2.4

2. Includes the Yukon, Northwest Territories and Nunavut.

## 7. Higher education sector

Province	GERD in the higher education sector, 2003-2004 <sup>1</sup>			Distribution of R & D Personnel, 2002 <sup>2</sup>	
	millions of dollars	dollars per capita	rank	Professionals full-time equivalents	Total
Newfoundland and Labrador	114	220	8	510	<b>840</b>
Prince Edward Island	23	168	10	60	<b>120</b>
Nova Scotia	259	277	5	940	<b>1,560</b>
New Brunswick	113	150	9	530	<b>860</b>
Québec	2,342	313	2	10,140	<b>13,180</b>
Ontario	3,184	260	1	13,450	<b>17,840</b>
Manitoba	239	206	7	950	<b>1,510</b>
Saskatchewan	244	245	6	880	<b>1,400</b>
<b>Alberta</b>	827	262	3	3,620	<b>4,900</b>
British Columbia	787	189	4	3,830	<b>5,130</b>
<b>Canada</b>	<b>8,132</b>	<b>257</b>		<b>34,910</b>	<b>47,340</b>

1. *Estimates of Canadian Research and Development Expenditures (GERD)*, Canada 1994 to 2005 preliminary and by Province 1994 to 2003, Science, Innovation and Electronic Information, Division, Statistics Canada, 88-001-XIE, Vol. 29, No. 8, (December 2005) Table 8

2. Research and development (R&D) Personnel in Canada 1979-2002 ST-05-08 (May 2005). Table 1.7

## PROVINCIAL CO-ORDINATORS

Three provincial governments are currently sponsoring the Science and Technology Surveys section in the collection of similar scientific activity data. In Québec, a survey of only Research and Experimental Development (R&D) statistics is conducted by the Institut de la statistique du Québec and shared with Statistics Canada. Below is a list of co-ordinators for the various sponsoring Departments/Ministries.

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- 88-204-XIE** Federal scientific activities, (annual)

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- No. 2** Biotechnology scientific activities in federal government departments and agencies, 2004/2005 (March 2006)

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