

Update

Ministry

Treasury Board and Finance

Describe: Basic Job Details

Position

Position ID

Position Name (200 character maximum)

Demographic Analyst

Current Class

Program Services 3

Job Focus

Operations/Program

Supervisory Level

00 - No Supervision

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Organizational Structure

Division, Branch/Unit

Office of Statistics and Information, EFP

☐ Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

Design: Identify Job Duties and Value

Changes Since Last Reviewed

Date yyyy-mm-dd

Responsibilities Added:

6. Participate in the production and improvements of population estimation for various sub-provincial regions.

Responsibilities Removed:

6. Participate in the development of population estimation models for various sub-provincial regions.

Job Purpose and Organizational Context

Why the job exists:

The Alberta Office of Statistics and Information (OSI) is a branch within the Economic and Fiscal Policy division in Treasury Board and Finance. The OSI is Alberta's statistical body and the Statistical Focal Point for the province to Statistics Canada. Our mandate is to plan, promote, consolidate and develop social and economic statistics relating to Alberta. The office is responsible for publishing, investigating, and collaborating across the Government of Alberta (GoA) on questions relating to social or economic conditions and issues.

Reporting to the Manager, this position involves providing analytical support to the operations of the OSI, with a focus on population data and analysis. Working closely under the guidance of the Manager, the Data Analyst leverages their specialized expertise to offer crucial assistance for various facets of population data and analysis, including projections, estimates, census, and other related endeavors, all of which are aligned with the Ministry Business plan. This position demonstrates skills in population projections, estimates, data analysis, data manipulation, data management, and quality assurance processes using various software and programming languages such as SAS, R. This role is key to developing accurate and reliable population data and analysis to support policy analysis, economic and revenue forecasting, planning, and decision-making for the division, the government, and the public.

Responsibilities

Job outcomes (4-6 core results), and for each outcome, 4-6 corresponding activities:

1) As part of a team; develop sound population data that are timely and meet the needs of both Treasury Board and Finance and the GOA for fiscal and economic planning initiatives. Specifically, the position's responsibilities include:

1. Produce demographic projections for standard Alberta geographic regions as required to meet the needs of Finance and the GOA to be used in the fiscal and economic forecasts;
2. Prepare demographic reports analysing current and future demographic trends in Alberta to ensure that the department is kept fully apprised of new and emerging issues;
3. Evaluate new and current demographic data sources for analytical use to improve the quality and timeliness of provincial demographic projections;
4. Through ongoing research and participation on cross-government working groups and committees, maintain a high level of awareness on current and emerging demographic trends within the province;
5. Provide technical advice and evaluations of population projections prepared by other organizations both within and external to the GOA.
6. Participate in the production and improvements of population estimation for various sub-provincial regions.

2) Propose and carry out research on key socioeconomic factors underlying demographic trends (e.g. the factors driving interprovincial migration flows).

3) Maintain liaisons with appropriate federal and provincial government counterparts to keep apprised on new developments in the area of demographic statistics and data development and analytical techniques.

4) Through individual research, study or course work keeps current with leading edge analytical research and analysis techniques, concepts and theories in the areas of assigned responsibility.

5) Under the general supervision of the Manager, Demography, the position contributes to the development of sound population projections used in the economic and fiscal forecasts in the provincial budget. These have significant implications for government revenue forecasts and fiscal policy decisions.

1. While the overall population projections/forecasts are developed using standard demographic techniques, the incumbent must exercise good judgement in developing assumptions for various sub-components such as inter-provincial and intra-provincial migration flows. This may require the creative application of complex analytical techniques to identify and assess the key drivers for these sub-components, and in some cases to develop the underlying socio-economic data from government administrative sources. The quality and scope of these analyses has a significant impact on the quality of the projections.
2. Population projections/estimates are heavily scrutinized by both departmental and GOA users as they generally form the basis for additional demographic research. The ability to validate all estimates and projection scenarios produced and have them recognized as demographic standards requires the position to maintain not only a high level of expertise but an extensive understanding of the various demographic data usages throughout government. This includes an expert knowledge of sub-population such as seniors,

- children and transients/shadow populations on which special economic and social programs are based.
3. The development of provincial and sub-provincial demographic estimates and projections requires the position to maintain a broad range of demographic expertise to ensure users are fully aware of all potential caveats and appropriate uses for the data. The position is expected to consult with both government and non-government users, demographic researchers and advise on the incorporation of the department's demographic information in various policy and programming initiatives.

Problem Solving

Typical problems solved:

- Contributes to demographic expertise and socio-demographic analysis across the government.
- Works with a variety of data, ranging from public to sensitive datasets while maintaining data security and aligning with applicable legislation and data sharing agreements.
- Helps to develop novel processes from automating complex models, projections, estimates and analysis at the provincial and sub-provincial level.
- Validates datasets and methodologies to ensure analysis leverages statistically sound processes and meets quality assurance requirements.
- Works independently to meet project milestones using appropriate project management tools and processes.
- Asks questions to get a deeper understanding of issues and tasks.
- Documents processes and creates useful supports to support knowledge transfer and learnings within the team.

Types of guidance available for problem solving:

Overall, effective problem solving as a data analyst in Demography requires a combination of technical demographic, statistical, interdisciplinary, and professional guidance and skills, depending on the specific challenges and problems encounter in the work.

1. Statistical guidance involves using statistical methods and techniques to analyze data and identify patterns, trends, and relationships. You can use statistical software and programming languages to carry out exploratory data analysis, hypothesis testing, regression analysis, and other types of statistical analysis.
2. Technical guidance involves using technical tools and resources, such as research and methods in the field, seeking advice from demographic experts both internal and external to the GOA, data visualization tools, and data programming software.
4. Interdisciplinary guidance involves collaborating with experts from other disciplines, such as economics, statistics, and social sciences to integrate insights and knowledge from different fields into the problem-solving approach. For example, the data analyst needs to work with economists to provide accurate assumptions for the annual population forecast for the provincial Budget.
5. Professional guidance involves seeking advice and guidance from professional organizations and networks to access to resources, training, and networking opportunities that can help with staying up-to-date with the latest developments in the related fields and connect with other professionals who share interests and challenges.

Direct or indirect impacts of decisions:

Direct impacts of decisions can have a significant effect on the quality and reliability of population data and analysis, as well as on the decisions and policies that are based on this information. Some examples of direct impacts of decisions could include:

- Developing long-term population projections by sub-provincial geographies, which help inform decision-making and planning across the GOA.
- Producing sub-provincial population estimates, used both within and external to the GOA for planning, funding and information purposes.
- Ensuring that population data is collected, processed, and reported in a timely and consistent manner, to enable policymakers and other stakeholders to make informed decisions based on up-to-date information.

Decisions this position makes can have indirect impacts on various stakeholders and planning purposes, beyond

the immediate context of data analysis and production, including impacting economic forecasts through population forecasts, as well as contributing to service planning and delivery at a societal level through the development of more informed decision-making.

Key Relationships

Major stakeholders and purpose of interactions:

Internal Stakeholders

- Executive Team: Provide data and information, analytical brief and response to Action requests as needed (Frequency: As required)
- Director: Provide information as needed (Frequency: As required)
- Supervisor: Consult and obtain direction on project priorities and initiatives (Frequency: Daily)
- Team: Collaborate on data development, analysis, and management within the team (Frequency: Daily)

External Stakeholders

- Cross-Government (Other ministries across GoA, other municipal, provincial and federal governments): Participates on projects and teams (Frequency: As required)
- Contractors/Businesses/ Researchers: Provide data and information, advice and consult on projects (Frequency: As required)
- Public: Provide data and information, insight, and advice (Frequency: As required)

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Master's Degree	Other	Economics	

If other, specify:

Demography, Sociology, Economics, Statistics, or a closely related field

Job-specific experience, technical competencies, certification and/or training:

University graduation with a concentration in demography, economics or related area, supplemented with a minimum of two years of experience in research and analysis is required.

Experience with computing systems and statistical software such as SAS or R is essential. A background or course work in demography or population research would be considered an asset.

Masters Degree is preferred.

Equivalencies will be considered on the basis of:

- o 1 year of education for 1 year of experience; or
- 1 year of experience for 1 year of education.

Skills and Abilities

- Strong oral and written communication skills to communicate effectively with stakeholders.
- Strong ability to work independently and as a member of a team.
- Excellent interpersonal skills to interact professionally with external stakeholders and staff.
- Strong ability to prioritize and handle tight deadlines.
- Strong organizational and project management skills to optimize resources and effectively manage time.

- Innovative and self-motivated, and capable of handling a wide range of project responsibilities.

Behavioral Competencies

Pick 4-5 representative behavioral competencies and their level.

Competency	Level					Level Definition	Examples of how this level best represents the job
	A	B	C	D	E		
Agility	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Works in a changing environment and takes initiative to change:</p> <ul style="list-style-type: none"> • Takes opportunities to improve work processes • Anticipates and adjusts behaviour to change • Remains optimistic, calm and composed in stressful situations • Seeks advice and support to change appropriately • Works creatively within guidelines 	<p>Adjusts to changing timelines and priorities, seeks out advice when direction is unclear. Responding to changing business needs, handling ambiguity, when there is incomplete data or information, and learning quickly are some examples showing how this skill/level helps the data analyst to continuously improve the quality of work.</p>
Develop Self and Others	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Seeks out learning and knowledge-sharing opportunities:</p> <ul style="list-style-type: none"> • Reflects on performance and identifies development opportunities • Takes initiative to stay current • Shares with the team even when not asked • Actively coaches and mentors direct reports 	<p>Sharing knowledge and expertise within team, while staying updated with the latest demographic trends, theories, and data sources. Dedicating time to continuous learning, attending workshops, and staying current with related publications and data trends.</p>
Drive for Results	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Works to exceed goals and partner with others to achieve objectives:</p> <ul style="list-style-type: none"> • Plans based on past experience • Holds self and others responsible for results • Partners with groups to achieve outcomes • Aims to exceed expectations 	<p>Pursuing accuracy and quality, analyzing data efficiently, focusing on key priorities, collaborating effectively, finding solutions and meeting deadlines are different examples of how this skill/level is essential for the position.</p>
Creative Problem Solving	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Focuses on continuous improvement and increasing breadth of insight:</p> <ul style="list-style-type: none"> • Asks questions to understand a problem • Looks for new ways to improve results and activities 	<p>Works to improve current demographic products, including projections and estimates. Engages with stakeholders, colleagues and clients to validate assumptions and results to ensure accuracy and credibility.</p>

		<ul style="list-style-type: none">• Explores different work methods and what made projects successful; shares learning• Collects breadth of data and perspectives to make choices	Completes own research and asks questions/ seeks feedback to solve complex problems. Shares results with the team.
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Benchmarks

List 1-2 potential comparable Government of Alberta: [Benchmark](#)

023PS73

023PS75

Assign

The signatures below indicate that all parties have read and agree that the job description accurately reflects the work assigned and required in the organization.

_____ Employee Name	_____ Date yyyy-mm-dd	_____
_____ Supervisor / Manager Name	_____ Date yyyy-mm-dd	_____ Supervisor / Manager Signature
_____ Director / Executive Director Name	_____ Date yyyy-mm-dd	_____ Director / Executive Director Signature
_____ ADM Name	_____ Date yyyy-mm-dd	_____ ADM Signature
_____ DM Name	_____ Date yyyy-mm-dd	_____ DM Signature