

New

Ministry

Public Safety and Emergency Services

Describe: Basic Job Details

Position

Position ID

Position Name (30 characters)

Crime & Safety GIS Lead

Requested Class

Technologies 7

Job Focus

Operations/Program

Supervisory Level

00 - No Supervision

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Vacant

Organizational Structure

Division, Branch/Unit

SSII/Mod, IMT, & Research/Data Analytics & GIS

Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

Design: Identify Job Duties and Value

Job Purpose and Organizational Context

Why the job exists:

Public Safety and Emergency Services (PSES) has a mandate to keep Alberta communities safe and secure, and ensure our province is prepared for and resilient to the impacts of disasters. Within the ministry, the Strategy, Support and Integrated Initiatives (SSII) Division, partners with stakeholders to translate broad ministry priorities into meaningful plans and strategies which are supported by evidence-based and forward-thinking approaches. The SSII's Modernization, IMT, & Research Branch provides high-quality data, research, evaluation, and analytics to support strategic decision-making, policy development, forecasting, service design, and resource allocation across government and to the public.

Reporting to the manager, this position provides unique expertise on the integration of complex social and community datasets with the technical aspects of advanced GIS analytics, development, and aggregation of both geospatial and tabular databases using a variety of data management and technology tool sets. The candidate will provide analytical and technical to leadership to assimilate the data requirements of diverse stakeholder groups, and provide innovative solutions that build the geospatial data competencies essential to addressing the unique and specialized needs of the Public Safety and Emergency Services sectors of the Government of Alberta.

Responsibilities

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

ENHANCED ANALYSIS
Execute the collection and aggregation of datasets received from data authorities, administrative data systems, and external stakeholders to create insights and data driven decision-making by:

- directing development and maintenance of technical specifications, enterprise databases, and data models for ministry datasets and related information;
- designing dashboards, maps, and other visualizations to help portray learnings with simplicity and impact;
- advocating to develop on opportunities for advancement spatial analytics with the development of policies, systems, and datasets;
- providing technical guidance and/or direction to other stakeholders leveraging geographic analysis.

DATA INTEGRATION

Advance the integration and processes for augmenting foundational GIS datasets in accordance with applicable legislation, standards, and processes to ensure trustworthy data for analysis by:

- applying appropriate technical adjustments and calculations to integrate location into other legal and statistical databases;
- developing methodologies and processes used for creating/updating geospatial datasets and creating/updating metadata records;
- following up with requests and concerns regarding geospatial data integration and analysis;
- exploring and selecting appropriate methods and datasets for tabulating geospatial statistics and analyzing their relationships with other geographies and statistics in the province.

CLIENT SUPPORT

Guide GoA ministries and PSES staff on issues related to geospatial analysis, technical methodologies, and data development to ensure the Government of Alberta and the ministry of PSES has access to appropriate expertise and data by:

- maintaining awareness of vital initiatives underway in other ministries with cross-ministry impact;
- providing direction on best practices for working with geospatial data for ministries;
- building supports to help clients understand geospatial analysis;
- leading technical working groups involved in the creation of new boundaries and geographies;
- investigating and recommending options for resolving discrepancies and variances in datasets leveraged in analysis.

PROGRAM TECHNICAL ADVANCEMENT

Direct the evaluation and assess research and best practices for creating, analyzing and visualizing geospatial datasets to ensure efficiency and optimization of the analysis and processes leveraged by:

- researching guidance and maintaining currency on analysis taking place in other jurisdictions;
- participating in knowledge sharing projects/pilots with groups like the Open Geospatial Consortium or Canadian Center for Justice Statistics;
- automating ingestion and aggregation of datasets and ensuring cross-jurisdictional integration to ensure currency and interoperability of geospatial datasets;
- recommending and testing new methodologies and processes to streamline analysis;
- creating and documenting new models and methods, analysis, and presentations on aspects of geospatial intelligence for the Justice and Public Safety and Emergency Services Community of Practice.

PROGRAM CAPACITY

Provide operational support to ensure time lines and schedules for existing projects are met and augment capacity to meet demand for new project requests within the team by:

- maintaining a familiarity with other foundational datasets;
- assisting with audits and quality control of incoming data deliverables;
- supporting data loading and cataloging of products;
- providing back up for clean-up and organizing of data assets in accordance with existing standards and structures;
- providing back up support for data requests and the team's support email address as required.

CONTRACT RESOURCE MANAGEMENT

Provide direction to contracted resources to ensure adequate support, high quality dataset returns, and value for dollar is realized by:

- providing project contract estimates, Terms of Reference, strategies, policies and recommendations to managers to ensure technical standards and specifications are met;
- building technical specifications for Requests for Proposal;
- auditing and directing quality assurance assessments on contract returns;
- recommending acceptance or remediation for audited contract returns;
- providing technical guidance to contractors as required.

Problem Solving

Typical problems solved:

The challenges faced by the role require expert level analysis, reasoning, evaluation, judgment and problem-solving skills. Significant interpretive, evaluative and developmental thinking is required, along with the ability to understand complex relationships and facilitate decision-making processes involving stakeholders.

Challenges of this position include:

- Solving problems relating to project management, data quality, and development in advancing analytics and business intelligence solutions.
- Solving problems related to missing, poor or incomplete data, often requiring the use of alternative data source as proxies or the development of tools to improve analytics.
- Identifying the best methodological approaches to the analysis of data that is relevant accurate and understandable.
- Delivering timely analysis in-step with shifting time lines and requirements to provide prescient insight on current trends.

In addition, this position faces the challenge of managing the real-time mapping applications and dashboard while balancing requests for new analysis, products, and services to support business intelligence.

Types of guidance available for problem solving:

Minimal direction is provided relating to the provision of new and unique analysis and services, with the position undertaking responsibilities of their own initiative. General direction is received at the beginning of significant projects, with objectives and time lines agreed to with the manager and other leadership.

The position requires an understanding of problem-solving tools and techniques, including risk-based decision making processes, consultation, collaboration, and consensus-seeking processes. This position serves as a subject matter expert who has advanced knowledge of Public Safety and Emergency Services operations. Solving problems requires a collaborative approach and needs to draw on a wide network of contacts and available research from industry and academic experts. The position also needs a strong understanding of stakeholder interests as well as the perspective of the ministry to ensure the dataset development meets the requirements. This position requires a strong analytical and technical understanding to identify issues and create innovative solutions.

Direct or indirect impacts of decisions:

The incumbent supports the development of geospatial analysis and data intelligence that provide internal and external clients and stakeholders with convenient and efficient insights on ministry data leveraged by a variety for a variety of applications and analysis.

The Modernization, IMT, & Research Branch and ministry partners will rely on results and datasets developed by this specialist. If not implemented with attention to detail, as well as timely problem solving and technical precision, the ministry is at risk for using unreliable or incomplete information to make decisions, misrepresenting justice system trends or investments and potentially harming justice system participants, including offenders, victims, the legal community and police.

Key Relationships

Major stakeholders and purpose of interactions:

INTERNAL

Executive Director - As required - To receive feedback and provide updates

Director - Regularly- To receive feedback and provide updates

Manager - Daily - Consults and collaborates on project development, and upcoming milestones within the team's projects

EXTERNAL

Cross-Government -As Required - Leads and participates on projects and teams.

Contractors - As Required - Providing auditing, feedback and consultation on projects.

Public - As Required - Provides insight and advice.

Required Education, Experience and Technical Competencies

Education Level Bachelor's Degree (4 year)	Focus/Major Other	2nd Major/Minor if applicable Other	Designation
--	-----------------------------	---	-------------

If other, specify:

A degree or diploma in a relevant discipline (Technology, Sciences (GIS), Engineering, Business)

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

Extensive knowledge of geographic information systems, public safety, and criminology is required; necessitating a degree in one of the following: criminology, sociology, public safety, or other social sciences with an additional to a specialization in GIS/geography or a combination of 10 years of progressively responsible work experience and education in a related field.

This background is essential to ensure there is a basis for providing sound decision-making, analysis, support, and guidance for clients regarding appropriate methodologies and processes. In addition, a strong knowledge of statistical & government geospatial data, standards, and analytical methodologies is required to perform the duties of this position.

The position requires a superior skills with ESRI software, tools, including ArcPro and the Portal for ArcGIS environment, FME, and scripting and programing in Python, Arcade, R, or other languages to facilitate data modeling, scraping, transformation, analysis, and automation. Experience with building applications for data analysis, assessing existing data sources for project suitability, and an interest and awareness of the goals of the ministry.

This position requires excellent communication, project management, time management, leadership and staff development skills, as well as analytical skills to track and resolve outstanding issues, identifying solutions, and provide support by collecting requirements, completing research, and recommending options for unique issue analysis.

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		
Creative Problem Solving	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Engages the community and resources at hand to address issues: <ul style="list-style-type: none"> Engages perspective to seek root causes Finds ways to improve complex systems Employs resources from other areas to solve problems Engages others and encourages debate and idea generation to solve problems while addressing risks 	<ul style="list-style-type: none"> -Engages and develops ministry learning and networking opportunities and additional training to expand knowledge of Justice and Public Safety systems. -Implements new technologies and methodologies to automate and improve delivery and development of products. -Seeks feedback and insight on projects.
Agility	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Identifies and manages required change and the associated risks: <ul style="list-style-type: none"> Identifies alternative approaches and supports others to do the same Proactively explains impact of changes Anticipates and mitigates emotions of others 	<ul style="list-style-type: none"> -Coordinate multiple projects with competing and strict deadlines. -Work in a dynamic environment with shifting priorities. -Proactively develops solutions and plans for addressing program area

		<ul style="list-style-type: none"> • Anticipates obstacles and stays focused on goals • Makes decisions and takes action in uncertain situations and creates a backup plan 	requirements.
Systems Thinking	○ ○ ○ ● ○	<p>Integrates broader context into planning:</p> <ul style="list-style-type: none"> • Plans for how current situation is affected by broader trends • Integrates issues, political environment and risks when considering possible actions • Supports organization vision and goals through strategy • Addresses behaviours that challenge progress 	<p>-Strong strategic orientation, including ability to conceptualize and develop a common vision/direction.</p> <p>- Integrate a geospatial understanding of ministry and system data in order to create innovative, accurate and timely data analytics products to support the strategic goals of the Ministry.</p>
Develop Networks	○ ○ ● ○ ○	<p>Leverages relationships to build input and perspective:</p> <ul style="list-style-type: none"> • Looks broadly to engage stakeholders • Open to perspectives towards long-term goals • Actively seeks input into change initiatives • Maintains stakeholder relationships 	<p>-Develop and maintain collaborative working relationships with colleagues from across the government and ministry subject matter experts.</p> <p>-Works to locate diverse stakeholders to inform dataset and project development and system modernization.</p>

Benchmarks

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

128TN01 - note there are Tech 7s in Alberta Energy and in the Office of Statistics (TBF) that may have more appropriate job descriptions. There are only 2 benchmarks available for Tech 7s