

New

Ministry

Public Safety and Emergency Services

Describe: Basic Job Details

Position

Position ID

Position Name (30 characters)

GIS and BI Analyst

Requested 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)

Vacant

Organizational Structure

Division, Branch/Unit

AEMA, Recovery Branch/PRC

Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

Program Services 4

Design: Identify Job Duties and Value

Job Purpose and Organizational Context

Why the job exists:

The Alberta Emergency Management Agency (AEMA) is accountable and responsible to the Government of Alberta (GoA), to Albertans, to their communities, and to industry for the protection of people, their property and the environment from the effects of emergency events. The AEMA accomplishes its objectives by leading the co-ordination, collaboration and co-operation between all entities involved in prevention, preparedness, response, and recovery activities.

The Recovery Branch assists individuals, businesses, municipalities, Metis Settlements, and government departments' recovery from damaged caused by a disaster by coordinating resources within the GOA and providing expert advice and financial assistance for uninsurable damages that are repair or restorative in nature as per the regulations of a disaster financial assistance program and broader recovery guidance. Within AEMA, the Business Operational Supports (BOS) unit provides internal supports to the branch in their work, providing coordination and technical supports in the forms of IT solutions and maintenance, the development of business standards, best practices, business planning and reporting, as well as the development, coordination and delivery of training.

Reporting to the Senior Business Standards Analyst, this position supports the Recovery Branch by providing technical GIS analysis, such as: generating key historical and current disaster impacts and disaster financial assistance information and analysis, conduct analysis to support work-related to resilience within the Recovery Branch, provide technical GIS expertise in a variety of assignments, perform computer-aided

tasks such as GIS data maintenance/exports, data analysis, graphics production, and other complex functions and technical support tasks.

This position will also develop the Branch's business intelligence and reporting tools and practices. They will analyze data, identify trends, provide insights, and help convey these findings through data visualization and info-graphics to internal and external partners. This position enhances the Branch's ability to make informed, evidence-based decisions around resilience, disaster financial assistance, and recovery.

Responsibilities

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

Geospatial Systems Development & CRM Oversight: Lead the design, enhancement, and support of GIS-based tools to enable disaster recovery assessments and operational decision-making.

- Manage the technical development, maintenance, and optimization of the Community Recovery Matrix (CRM), a GIS-enabled tool for desktop damage assessments.
- Enhance the CRM's geospatial data model, spatial analysis capabilities, and integration with other recovery systems.
- Provide subject matter expertise and technical support for CRM and GIS training across the Recovery Branch and, as in relation to developed tools and reports, Recovery Branch's stakeholders and partners.
- Conduct applied research and validation to ensure the CRM's methodology, outputs, and spatial logic remain accurate and defensible.

Geospatial Analysis & Application Development: Deliver spatial data solutions and visualizations to support operational planning, reporting, and public communication.

- Serve as the GIS lead on projects, managing geospatial components, timelines, and deliverables.
- Design, configure, and deploy interactive GIS applications and dashboards using ArcGIS Online, ArcGIS Pro, Python, and Power BI.
- Perform spatial data processing, transformation, and analysis to support recovery operations and program evaluation.
- Respond to ad hoc mapping requests and provide spatial advisory services to internal stakeholders, particularly during activation and large-scale disasters to forecast and plan for the impacts of these incidents on Recovery operations.
- Develop and maintain geospatial data workflows that improve data quality, interoperability, and automation.

Data Management & Governance: Maintain high-quality geospatial and operational datasets to support analytics, reporting, and decision-making.

- Manage and curate authoritative datasets, including geospatial, statistical, and operational data, ensuring accuracy, completeness, and consistency.
- Monitor data quality and compliance with data governance standards; identify and resolve anomalies in collaboration with program areas.
- Develop and maintain metadata, data dictionaries, and standardized data collection templates.
- Implement data validation, transformation, and storage processes to support long-term data integrity and accessibility.
- Identify and integrate new data sources to enhance analytical capabilities and support evolving business needs.

Business Intelligence & Reporting: Develop data visualizations and analytical products to support evidence-based decision-making and performance monitoring.

- Design and deliver interactive dashboards, reports, and visualizations using Power BI, Tableau, and ArcGIS tools.
- Conduct quantitative and spatial analysis using SQL, R, Python, and Excel to identify trends, correlations, and performance insights.
- Automate data pipelines and reporting processes to improve efficiency and reduce manual effort.
- Analyze disaster financial assistance data and other program metrics to support strategic planning and operational improvements.
- Collaborate with stakeholders to define reporting requirements and ensure outputs are actionable and user-friendly.

Collaboration & Data Integration: Foster partnerships and promote data interoperability across government and stakeholder networks.

- Coordinate with relevant stakeholders and partners to enhance data accuracy, consistency, and timely delivery of geospatial products.
- Establish and maintain data-sharing agreements and collaborative relationships with GIS and BI teams across the GoA.
- Participate in cross-departmental working groups and project teams to support integrated data initiatives.
- Stay current with emerging GIS and BI technologies, tools, and best practices; recommend innovations to enhance team capabilities and service delivery.

This position may be required to work in the Provincial Emergency Coordination Centre or the Provincial Recovery Coordination Centre during emergencies in order to coordinate provincial emergency response and recovery efforts. In these circumstances, the position may require working extended and irregular hours and/or shifts with minimal or no notice, particularly during emergencies and exercises.

Problem Solving

Typical problems solved:

This position is responsible for developing and maintaining geospatial tools, data systems, and reporting products that support disaster recovery operations. The incumbent must apply technical expertise to design and enhance tools such as the CRM, develop dashboards and spatial visualizations, and ensure data quality across multiple platforms.

The role requires the ability to work with large and complex datasets, often with incomplete or inconsistent information, and to translate operational needs into technical solutions. The incumbent must troubleshoot issues related to data integration, spatial logic, and reporting accuracy, while balancing multiple priorities and responding to evolving program requirements. Creativity, attention to detail, and the ability to adapt tools and workflows to meet changing needs are essential.

Types of guidance available for problem solving:

Reporting to the Manager, this position works independently on assigned projects with regular guidance and support. The Manager provides direction on priorities, project timelines, and alignment with branch goals, while also offering technical mentorship and oversight.

The Manager is available to provide broader strategic context and support in navigating cross-functional collaboration or ministry-level initiatives. The position also collaborates with other analysts, program staff, and technical experts across the branch and government to ensure data consistency, compliance with standards, and effective delivery of geospatial and reporting products.

Direct or indirect impacts of decisions:

The impact of decisions and deliverables include:

- desktop disaster financial assessment analysis results, especially those that are large-scale events, that form the basis of multi-million dollar requests to Cabinet and Public Safety Canada;
- disaster financial assistance program creation to support significantly impacted communities to recover;
- Inform and influence policy, program, and operational decisions with recommendations, reports, and BI dashboards;
- enhance the efficiency of the branch's operations to expedite visits to affected communities, better gather disaster information, and the ability to automate certain manual tasks; and
- future planning of recovery-related initiatives based on data and could impact financial allocation of mitigation projects.

Key Relationships

Major stakeholders and purpose of interactions:

- Director - *As Required* - Provides strategic direction and receives updates on geospatial initiatives and system enhancements.
- Manager - *Regularly* - Consults on priorities, project timelines, and alignment with branch and ministry objectives.
- Continuous Improvement Advisor - *Regularly* - Collaborates on technical development, data standards, and project coordination.
- BOS Team Members - *Daily* - Works collaboratively to develop geospatial tools, share data, troubleshoot issues, and support operational needs
- Recovery Branch Teams - *Regularly* - Gathers requirements, shares geospatial products, and supports operational planning and reporting.
- IT and Data Governance Teams - *As Required* - Coordinates on data standards, system integration, and compliance with GoA policies.
- Recovery Branch and other Alberta Emergency Management Agency (AEMA) Staff - *Regularly* - Provides GIS support, training, and technical consultation for emergency management and recovery operations.
- Other GoA Ministries - *As Required* - Collaborates on data sharing, geospatial integration, and cross-ministry initiatives.
- PSES Strategy, Support, and Integrated Initiatives - *As Required* - collaborate on specific cases; share information; provide expertise related to geo-spatial reporting and data analytics, lead or participate in related projects projects
- Municipal and Regional Partners - *As Required* - Coordinates on data validation, mapping products, and recovery-related spatial analysis.
- Contractors and Vendors - *As Required* - Provides input on system enhancements, troubleshooting, and technical development.
- Public and Stakeholders - *As Required* - Supports public-facing mapping tools and provides spatial insights for communication and engagement.

Required Education, Experience and Technical Competencies

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

If other, specify:

Geography, Geomatics, Computer Science, Data Science

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

Education:

- A university degree in a related field such as Geography, Geomatics, Computer Science, Data Science, Environmental Studies, or a related discipline with a strong focus on GIS and data analytics plus two years of progressively responsible experience in geospatial systems development, GIS analysis, or data-driven application development. Equivalencies for experience in place or education will be considered.

Experience:

- Experience supporting or coordinating projects involving GIS tools, spatial data, or business intelligence solutions.
- Demonstrated experience in:
 - Developing and maintaining GIS-enabled tools and dashboards.
 - Performing spatial analysis and managing geospatial datasets.
 - Supporting data visualization, reporting, and automation initiatives.

Technical Competencies:

- Proficiency with ArcGIS Pro, ArcGIS Online, and related Esri tools for mapping, analysis, and application development.
- Experience with Python for geospatial scripting and automation; SQL for querying spatial and non-spatial data.
- Familiarity with Power BI, Tableau, or similar tools for creating dashboards and visual reports.
- Experience with Power Platform tools (e.g., Power Automate, Power Apps) to support workflow automation and

data integration.

- Understanding of data governance, metadata standards, and data quality assurance practices.
- Ability to document workflows, support user training, and provide technical guidance to non-technical users.
- Strong problem-solving, communication, and collaboration skills.

Assets (Preferred Qualifications):

- Certifications in GIS (e.g., Esri Technical Certification), data analytics, or project coordination.
- Experience working in a public sector environment, particularly in emergency management, disaster recovery, or municipal planning.
- Familiarity with data warehousing, ETL processes, or cloud-based geospatial services.
- Experience contributing to cross-jurisdictional data initiatives or open data platforms.
- Knowledge of disaster recovery programs, damage assessment methodologies, or community resilience planning.

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 	Engage with stakeholders to identify current and emerging issues that arise in disaster financial assistance programs, disaster recovery, and mitigation. Analyze, develop, and implement solutions and processes to resolve identified issues whilst demonstrating continuous improvement.
Develop Networks	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Leverages relationships to build input and perspective: <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 	Develop and maintain stakeholder relationships within AEMA and other ministries to maintain and expand accessible datasets, navigating questions and challenges regarding data access and sharing.
Build Collaborative Environments	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Collaborates across functional areas and proactively addresses conflict: <ul style="list-style-type: none"> • Encourages broad thinking on projects, and works to eliminate barriers to progress • Facilitates communication and collaboration 	Work within the Branch, as well as across the Agency and its partners, to identify and propose data sharing and visualization approaches to meet the needs of a variety of groups and purposes. Anticipate and seek understanding regarding data inquiries

		<ul style="list-style-type: none"> • Anticipates and reduces conflict at the outset • Credits others and gets talent recognized • Promotes collaboration and commitment 	and help in informing or guiding them towards more viable or improved solutions.
Agility	○ ○ ● ○ ○	<p>Identifies and manages required change and the associated risks:</p> <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 • Anticipates obstacles and stays focused on goals • Makes decisions and takes action in uncertain situations and creates a backup plan 	Develop and adapt reports to meet changing or urgent ad-hoc data inquiries. Proactively inform up on changes to data accessibility or intended use to mitigate risks in decision making dependent on the data requested. Advise on interpretations of data to prevent or address misrepresentation
Drive for Results	○ ○ ● ○ ○	<p>Takes and delegates responsibility for outcomes:</p> <ul style="list-style-type: none"> • Uses variety of resources to monitor own performance standards • Acknowledges even indirect responsibility • Commits to what is good for Albertans even if not immediately accepted • Reaches goals consistent with APS direction 	Proactively drives the ongoing enhancement of the Branch's data use and maturity of its reporting practices. Champions the application GIS and BI tools across the Branch and Agency. Seeks out opportunities to further enhance their personal capabilities to maintain relevance of their skills as well as opportunities to enhance that Branch's tools and datasets.

Benchmarks

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

023PS75 - Workplace Economist