



Emergency
ManagementBC



BCeMap – A Multi Agency Situational Awareness System for the Province of BC

URISA BC

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Systems**

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Historical Perspective

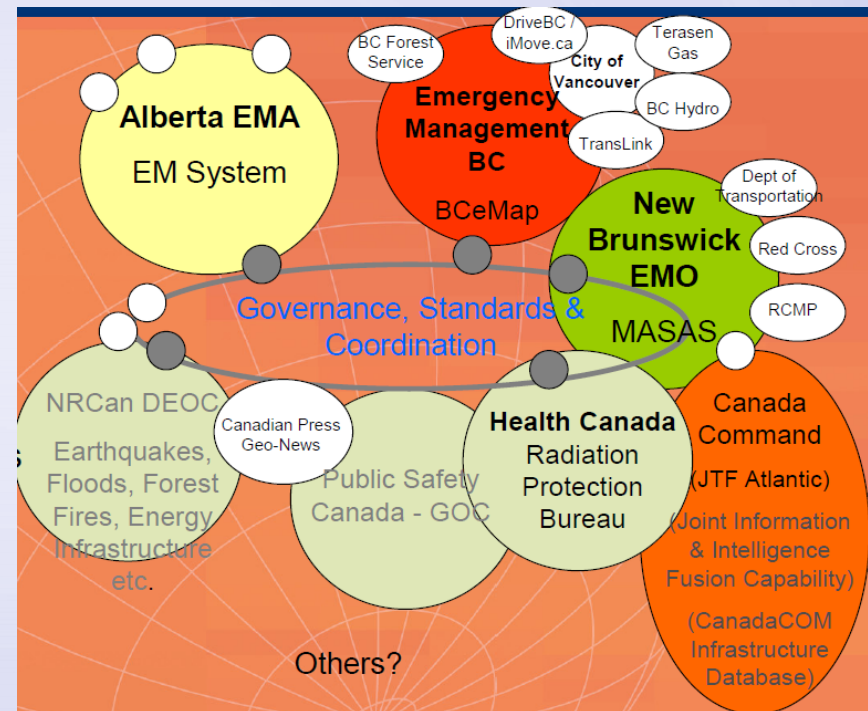
- ❖ **Shifting focus of GIS from Emergency Response to Preparedness**
- ❖ **Increase in frequency of Emergency Events & Expansion of GIS needs**
 - ❖ **Forest Fires**
 - ❖ **Flooding , Search and Rescue**
 - ❖ **Oil Spills, Avian Influenza**
 - ❖ **2010 Olympics**
- ❖ **Change in types of GIS Services**
 - ❖ **Hard Copy Maps**
 - ❖ **Web Mapping application/tools**
 - ❖ **Dynamic Real Time Incident and Mapping Information that can be shared with Multiple Agencies**

Multi – Agency Situational Awareness System (MASAS)

MASAS: Systems of Systems

Within MASAS, each agency:

- Controls what they share
- Decides what information from other agencies is relevant to them
- Uses their existing systems to publish and consume



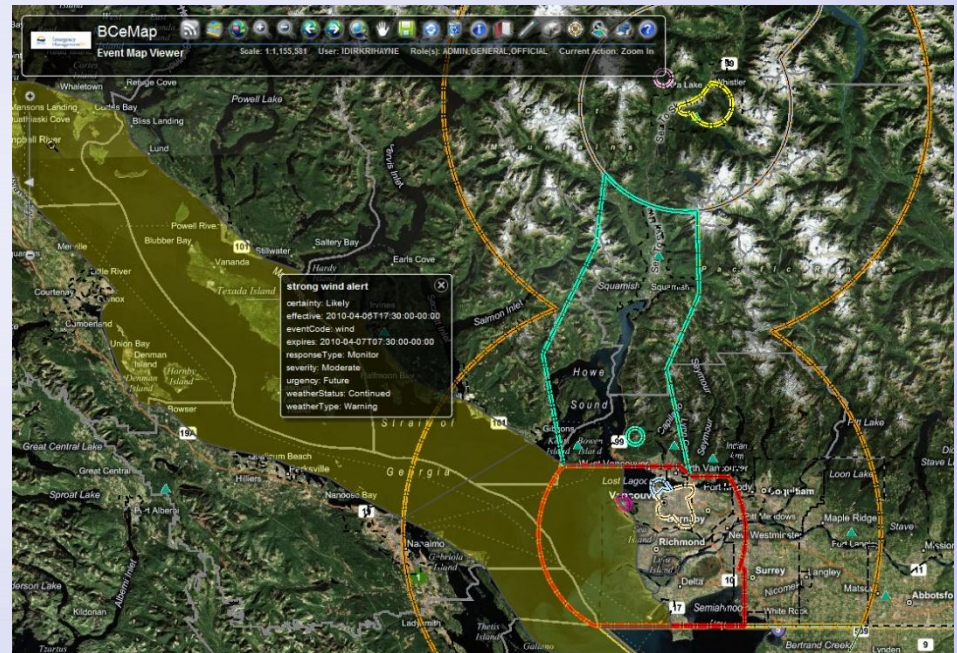
BCeMAP...

What is BCeMAP?

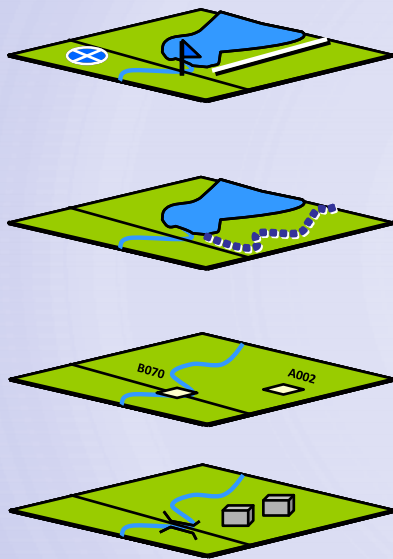
Multi – Agency Situational Awareness Tool

BCeMAP is Intended to Provide:

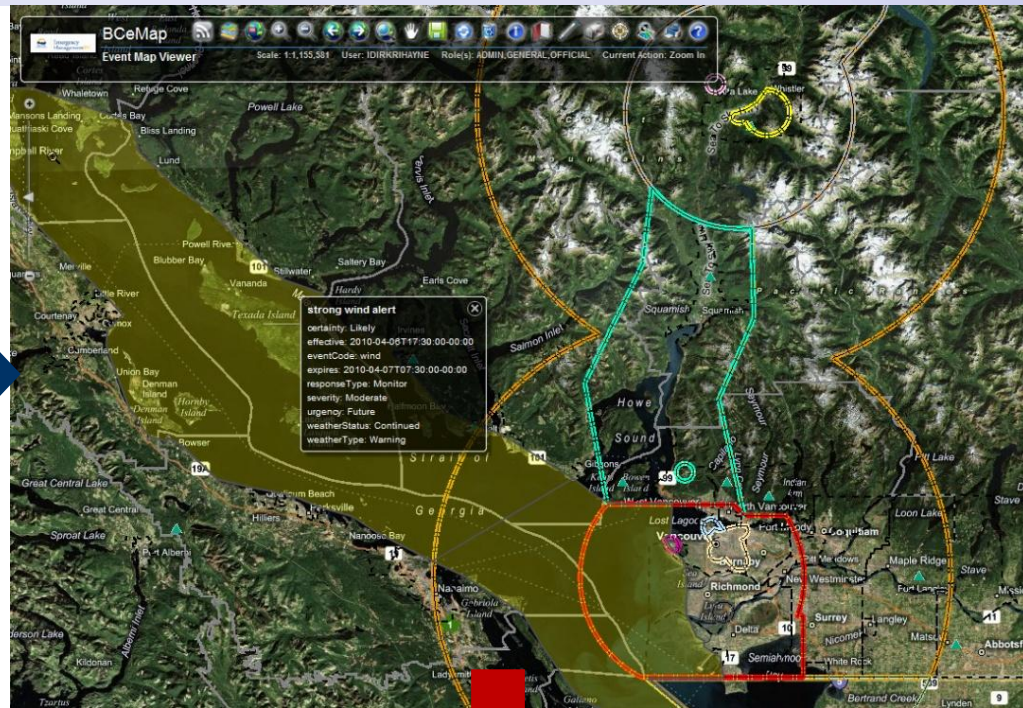
- Real time dissemination
- Common Operating Picture
- Access and dissemination
- Role Based



BCeMAP = A Geospatial Data Mashup



- Viewing of Real Time Incident Info
- Real Time Feeds (e.g. Weather)
- Thematic Mapping Data & CI
- Base Mapping Data



Funded through Geoconnections
Multi Agency Situational Awareness System (MASAS)

- Common Operational Picture
- Enhanced Situational Awareness
- Strategic Planning
- Operational Support
- Better Consequence Management

Use of Open Standards



GeoRSS &
ATOM



Extensible Markup Language & OASIS



Canadian EM Symbology



Canadian Profile of the Common Alerting Protocol (CAP-CP)



Multi-Agency Situational Awareness (MASAS)



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BCeMAP DEMO



Use Case: Large Scale Traffic Accident

Actor: Operations Section Chief

Responsibilities : Maintains situational awareness and shares key information with external agencies , internal staff and director

Task : Identify what may be at risk and notify key personnel



Scenario: Large Scale Traffic Accident

Richmond, BC—An 18-wheeler transporting 45,000 pounds of hydrochloric acid rolled over on hwy 99 near the Massey tunnel, which caused massive amounts of acid to be released into the air.

Richmond City Fire Department is stating that there is a large amount of hydrochloric acid spilling onto the hwy and into Massey tunnel from the tanker, and clouds of smoke can be seen from the scene. Two City police officers were overcome by the acidic fumes, and were rushed to a nearby hospital for treatment.



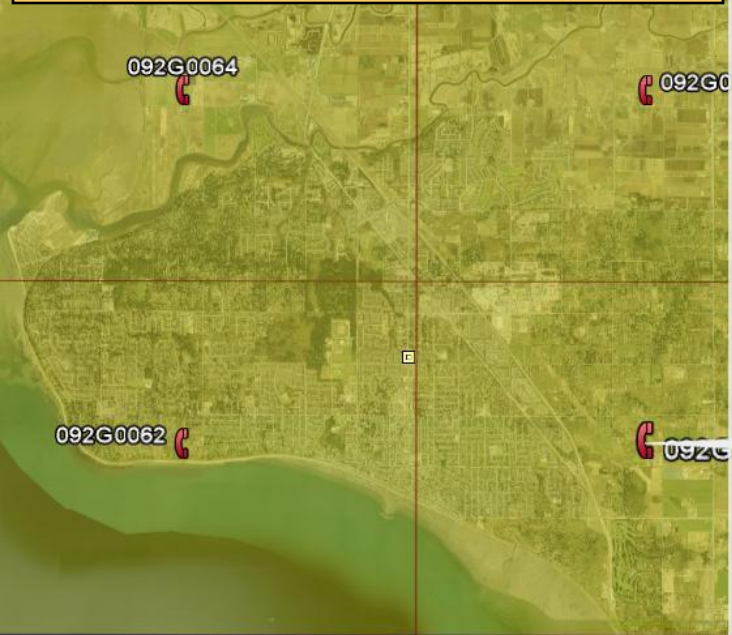
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BCeMAP Future Initiatives



CI Spatial Data Query Tool (CISQ)



092G0071

Critical Infrastructure Spatial Query(CISQ)

Contacts identified within tile 092G0071:

** Items listed below are in ascending order by owner.
* Scroll to the bottom of this window to select Aggregate Email Links*

Please Note:

(The Critical Infrastructure Spatial Query database includes only those critical infrastructure asset owners who have contributed data to the initiative. Users unfamiliar with the application should contact the Emergency Management BC Critical Infrastructure Coordinator prior to use.)

Owner: ARES
Operator: Not provided

Official Contact:
WSI Call Centre (24/7), Not provided
(Not provided)

Ph: 1-877-222-3112
Email: Not provided

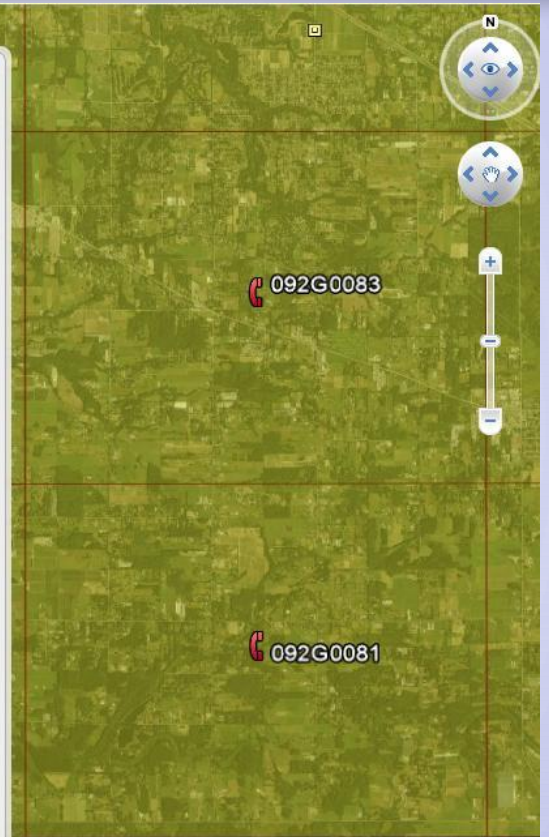
Emergency Contact:
Shawn Riches, Not provided
(Not provided)

Ph: 604-927-4012 or 604-315-3704
Email: shawn.riches@wsi-bc.com

Owner: ARES
Operator: Not provided

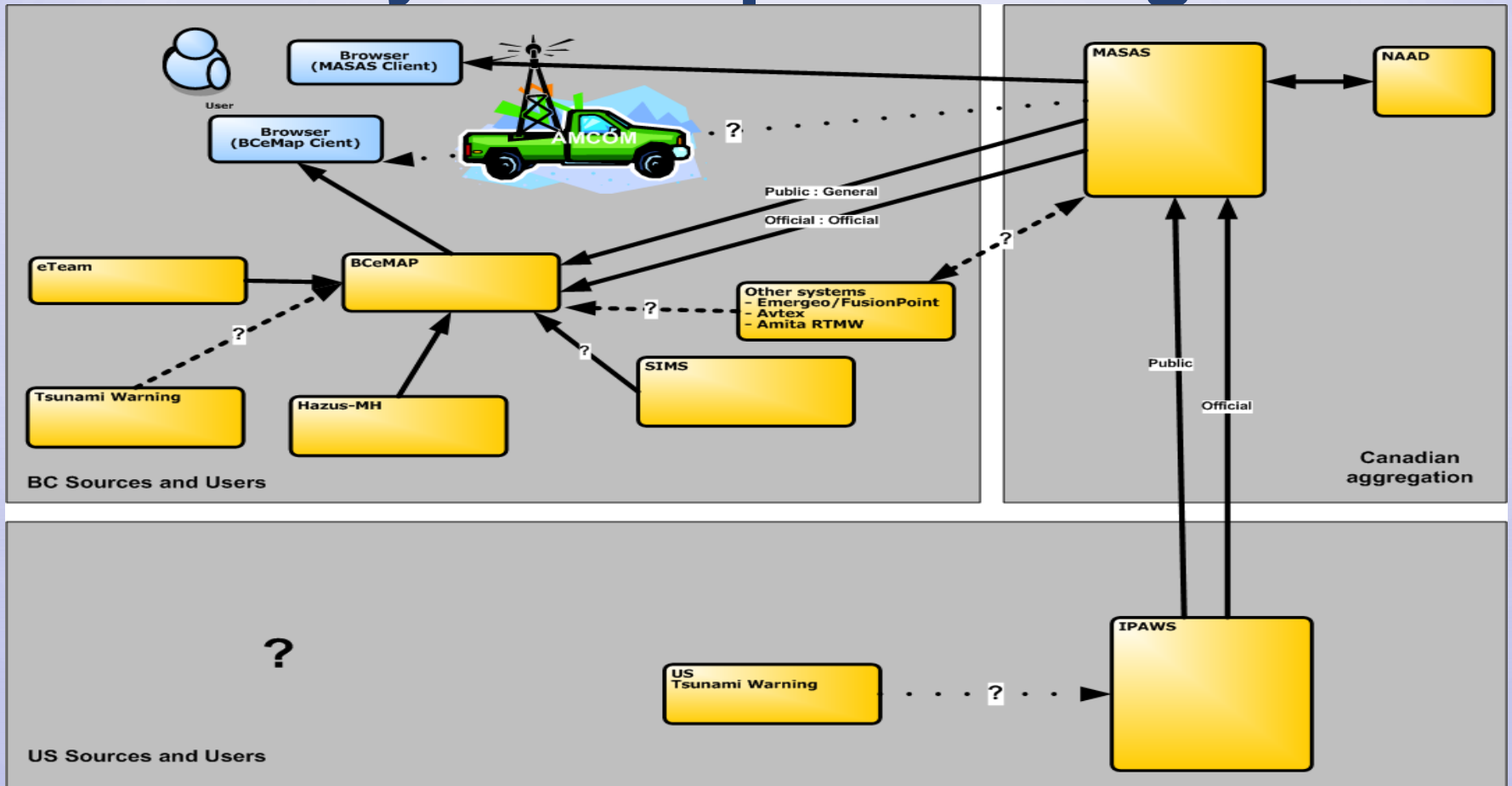
Official Contact:
WSI Call Centre (24/7), Not provided
(Not provided)

Ph: 1-877-222-3112
Email: Not provided





Summary Conceptual Integration





Challenges and Opportunities

- **Information/Data sharing**
 - **Data Agreements**
 - **Data maintenance and updating**
- **Dynamic feed integration**
- **Community of Practice**

Summary

- **Emergency management is all about coordination and interaction across organizational and jurisdictional boundaries**
- **Technology is a fundamental enabler, but there are significant costs**
- **Most challenges are people and process**
 - **Technology will fail if these issues aren't addressed**



BCeMAP Partners & Stakeholders

GeoBC

ESRI Canada

Planetnetworks Consulting

Office of the Fire Commissioner

BC Coroners Service

Ministry of Healthy Living
and Sport

Ministry of Agriculture & Lands

Ministry of Environment

Ministry of Transportation

BC Hydro

Capital Regional District

Fraser Valley Regional District

City of Vancouver

E-Comm

Center for Security Science /
Public Security Technical
Program

NC4

Environment
Canada

New Brunswick
EMO

GeoConnections

Ministry of
Health Services

Ministry of
Forests





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Thank You!

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BCeMAP Architecture

Authentication and Browser (Security)

Client Tier

Application Server (BCeMAP)

Application Tier

Feed Aggregator (FME)
ArcGIS Server

Web Services Tier

Data (Feeds, GeoBC LRDW)

Source Tier

