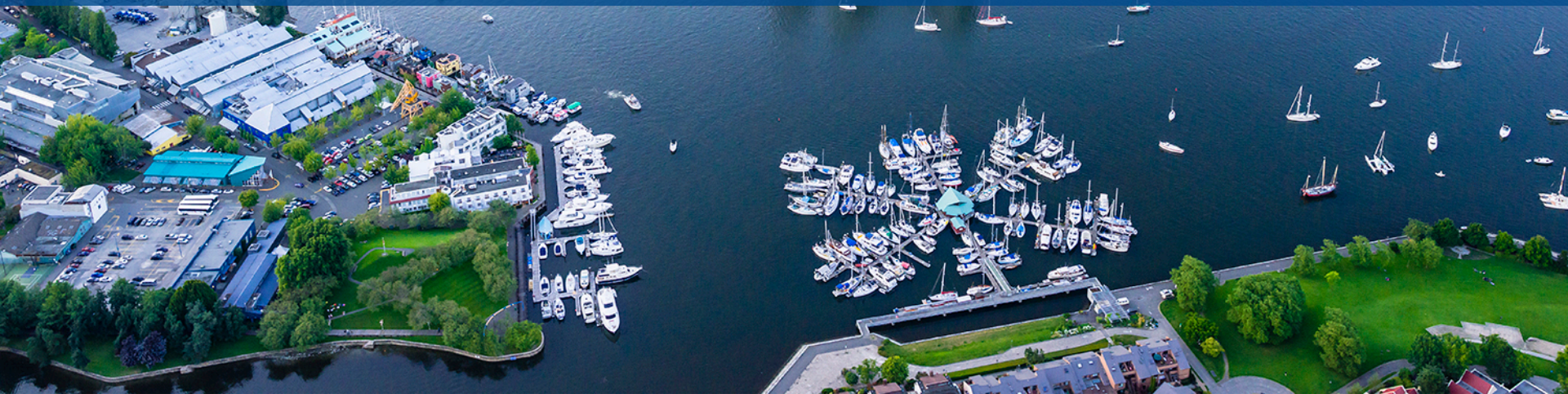




Earthquake Exercise, VanSlam 2019

April 23, 2019





Earthquake Preparedness Strategy

Earthquake Preparedness Strategy

Council Directed Initiatives

- Started seismic upgrades to bridges
- Dedicated fire protection system
- Canada Task Force 1 - Urban search & rescue team
- Emergency supply containers
- Emergency operations centre

Development of the Earthquake Preparedness Strategy

Concurrent implementation of Quick Win initiatives

Strategy endorsed by Council in Dec 2013

Strategy Implementation

Community and Volunteers

Critical Services

Buildings

Response and Recovery Planning and Capacity

2019 Highlights

- **VanSlam Earthquake Exercise**
- Updated Seismic Risk Assessment (part of the Private Building Seismic Mitigation Program)

1990-2010

2011

2012-2013

2014-2018

2019

2011 earthquakes in NZ, Japan

Earthquake Preparedness Strategy

Volunteers
and
Community

Critical
Services

Buildings

Emergency
Planning and
Capacity

Disaster Support
Hubs

ESS response plan

Vancouver Volunteer
Corps

Resilient
Neighbourhoods pilots

Enhanced public
awareness events
(e.g. Quake Cottage,
Shakeout Movie
Night)

Tools to support
business continuity
planning for small
businesses



Earthquake Preparedness Strategy

Volunteers
and
Community

Critical
Services

Buildings

Emergency
Planning and
Capacity

Bridge upgrades and
post-EQ inspection
plan

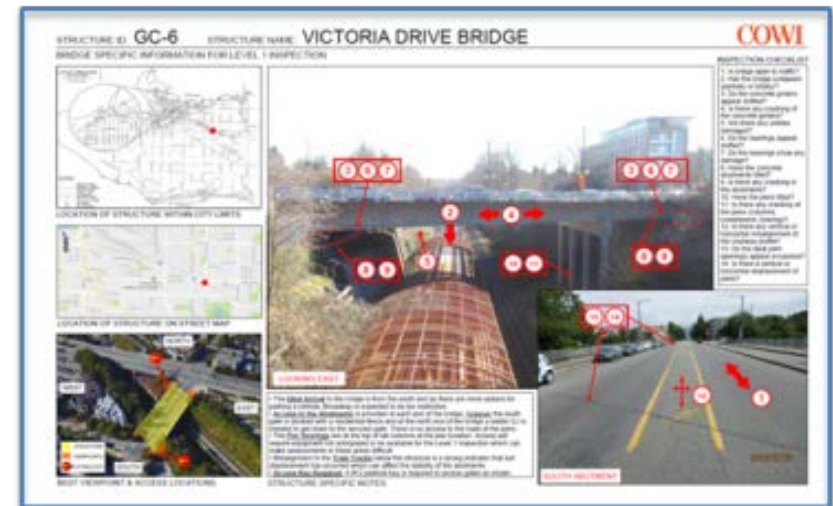
Pilot of Japanese-
made seismically
resilient water pipes

Developed risk-based
strategy to harden
water grid

Backup power to
sewer pump stations

Downtown emergency
transportation plan

Enhanced emergency
communications sites
on E-Comm radios
system



Earthquake Preparedness Strategy

Volunteers
and
Community

Critical
Services

Buildings

Emergency
Planning and
Capacity



Civic Buildings

- Deconstructed East Annex
- West Annex Seismic Upgrade
- Early Warning System Pilot
- Continued assessments of civic buildings

Private Buildings

- Established technical advisory group
- Updated earthquake risk assessment for buildings and building inventory

Earthquake Preparedness Strategy

Volunteers
and
Community

Critical
Services

Buildings

Emergency
Planning and
Capacity



Building Damage
Assessment Plan and
GIS tool development

VanORCA Emergency
Management
Information System

Training and Exercise
Program

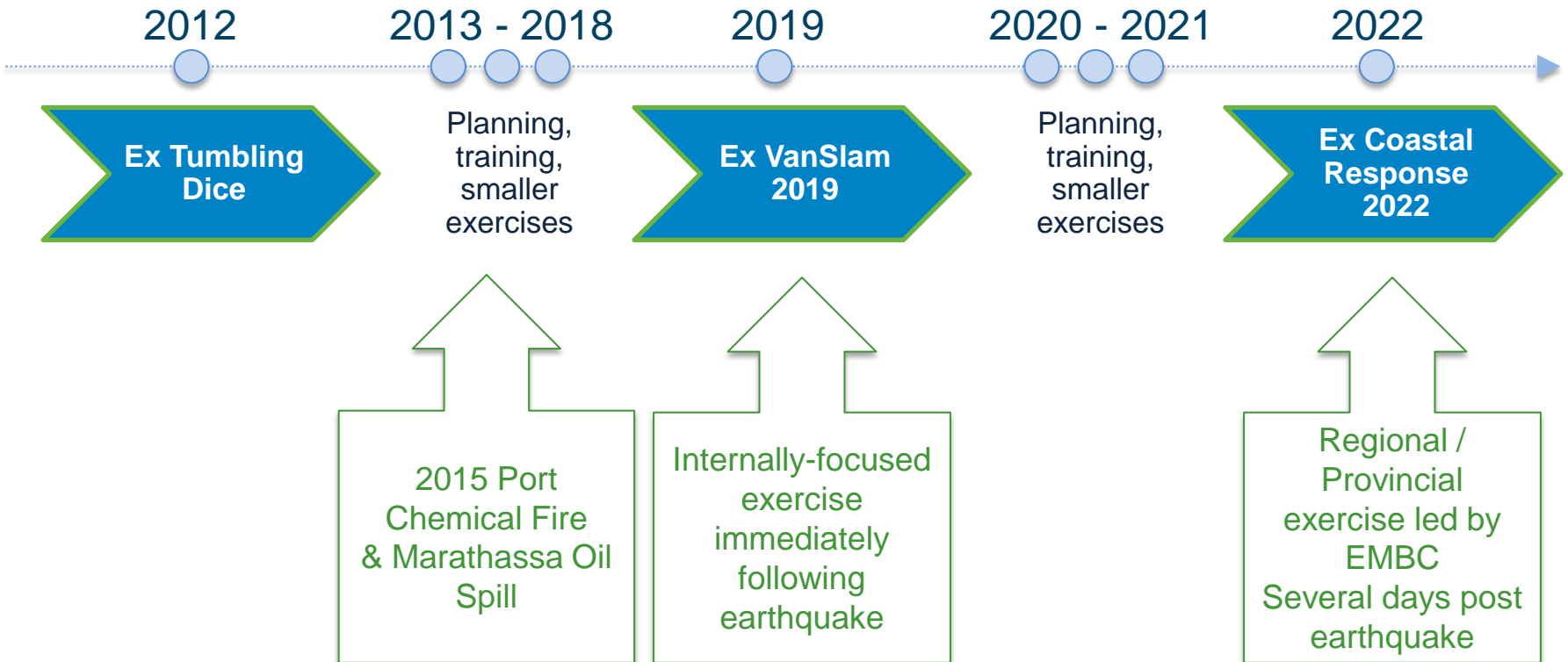
- Increased EOC staff pool to over 300 people
- Advanced EOC, Disaster Staging Area, and Rapid Damage Assessment training

VanSlam Earthquake
Exercise

Exercise VanSlam



Training & Exercise Program



VanSlam 2019 – Exercise Objectives



Response coordination

- Interaction between Disaster Staging Areas, Department Operations Centres, Reception Centres/Group Lodging Facilities, Emergency Operations Centre
- Engagement of Policy Group
- Provincial coordination via Provincial Regional EOC (PREOC)



Communication & technology

- Practice use of emergency communication devices (radio systems, satellite phone, satellite internet, amateur radio)
- Test various information management tools: VanORCA, VanEmerg, Emergency Notification System, field-based GIS tools



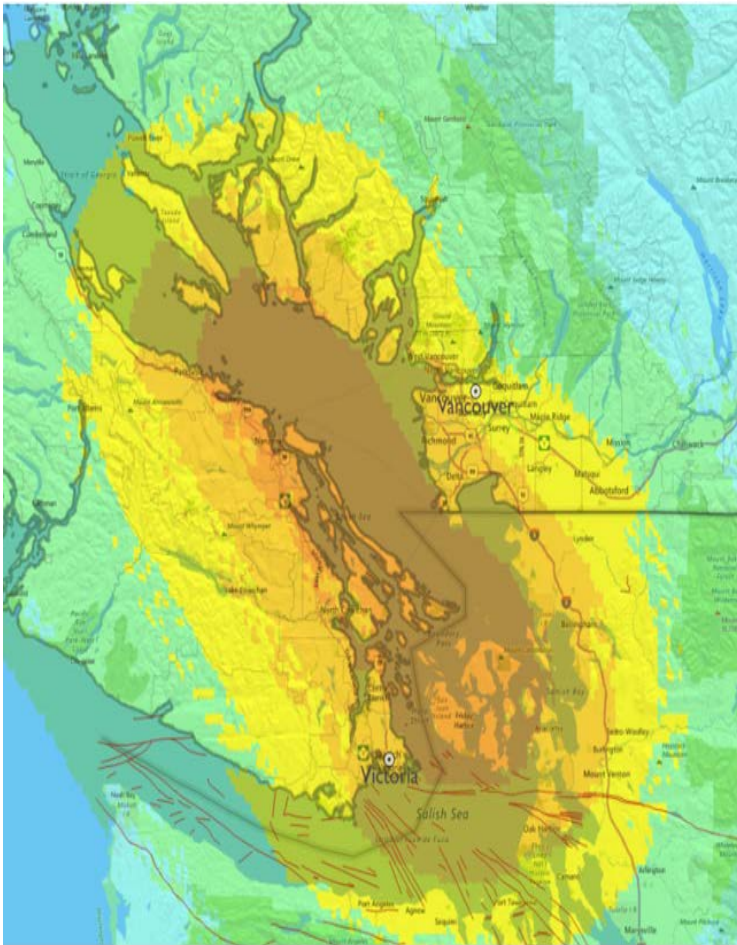
Damage assessment

- Building and infrastructure assessment
- Test Bridge Inspection Plan, Water Works Response Plan, Building Damage Assessment Plan

Mass care

- Activate two Reception Centres & Group Lodging facilities
- Test mutual aid support from NSEM, Red Cross, Richmond

Exercise Scenario



Major earthquake impacting Vancouver

- Scenario developed in partnership with Natural Resources Canada to facilitate exercise objectives

Impacts

- Transportation networks
- Damage affecting critical services
- Hospitals in code orange
- Numerous active fires
- Numerous power outages

Multiple requests for CAN-TF1 assistance & EMBC implements the *BC Earthquake Immediate Response Plan*

Participants

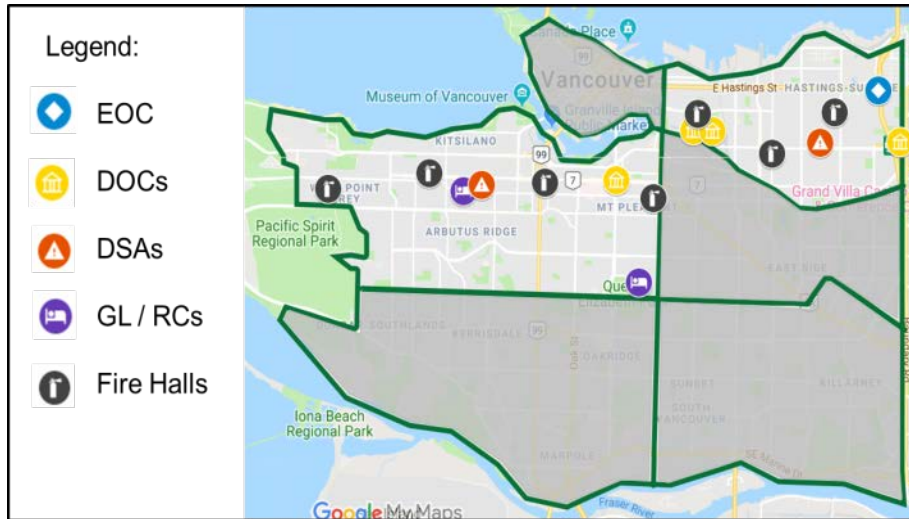
550 staff
137 volunteers
27 evaluators
9 controllers

20
exercise
design team

Department / Agency	# Staff
CEC, DIGITAL, 311	20
DBL	124
EOC (VanTEAMS)	79
ENG	83
REFM	42
VFRS	100
USAR (CAN-TF1)	50
VPB	23
VPD	29
VVC (NEAT, ESS, VECTOR)	137
TOTAL	686

Exercise Budget

	Category	Cost (\$)
2018	Consultant	65 K
	Other	4 K
2019	Consultant	92 K
	Other	72 K
	Exercise logistics (day of)	25 K
	Total	258 K



Key sites:

- Emergency Operations Centre
- Department Operations Centre
 - Fire
 - Police
 - Facilities
 - Park Board
 - Engineering
- Disaster Staging Areas
- ESS Group Lodging facilities and Reception Centres
 - Kitsilano
 - Hillcrest
- Fire Halls
- Urban Search and Rescue (CAN-TF1)

- EMBC participation through Provincial Regional EOC (PREOC)
- Evaluators and control support augmented by:
 - North Shore Emergency Management
 - Bowen Island - Musqueam FN
 - Coquitlam - Semiahmoo FN
 - Coquitlam - District of Squamish
 - Delta - BC Housing
 - Surrey - BC Hydro
 - Richmond - Justice Institute of BC
 - Port Moody - TransLink
 - Maple Ridge - IPREM
 - EMBC (Victoria) - UBC
 - RCMP E-Division - Seattle
 - Canadian Big City Emergency Managers Group

Learning and going forward



Post-earthquake Actions

- **Mayor:**

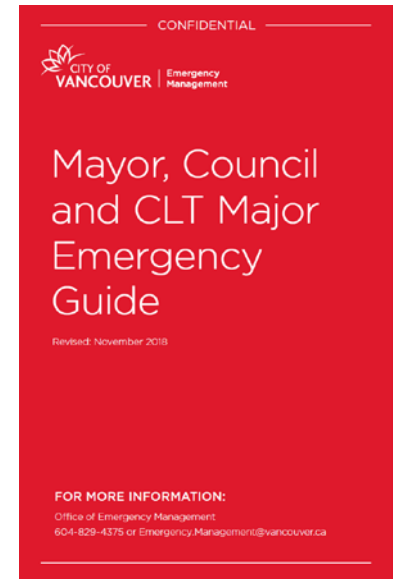
- Check-in with family
- Go to Emergency Operations Centre and join the Policy Group for initial briefing and declare of state of local emergency, if needed

- **Councillors:**

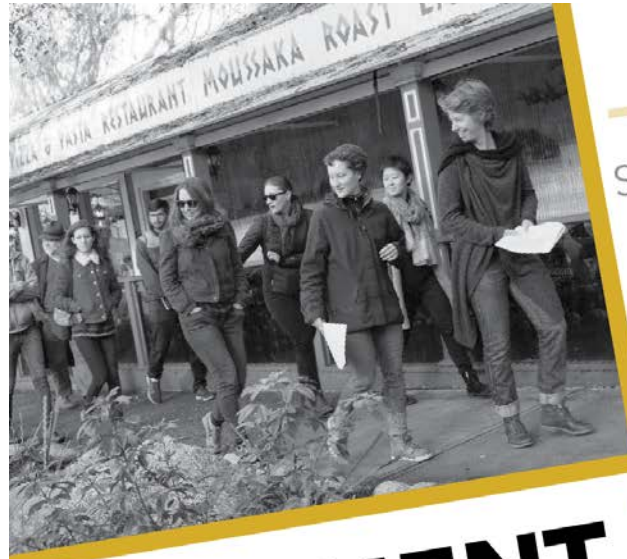
- Check-in with family
- If at City Hall, check-in with Security at the post-earthquake muster point
- If not at City Hall, check-in by phone with the Security Operations Centre/SOC
- Go home and attend to family, standby for further instructions

- **On May 10th – Exercise Day**

- you will receive an automated text/voice call stating the exercise is starting
 - *Mayor: please proceed to the EOC*
 - *Councillors: you do not need to check-in with the SOC/EOC for the exercise*
- you will receive an automated message (text and email) with reminders of your first steps and asking you to acknowledge receipt (click a link to acknowledge)



How can Vancouver get involved?



RESILIENT NEIGHBOURHOOD WALK SERIES



SATURDAY
MAY **4** MOUNT
PLEASANT

SUNDAY
MAY **5** RILEY
PARK

SATURDAY
MAY **11** GRANDVIEW
WOODLAND

SUNDAY
MAY **12** KERRISDALE

Learn more about the event
and register to save your spot at
neighbourlab.com/workshops

- **Learn** about emergency preparedness and resilience at the neighbourhood level
- **Discuss** how you can make your community more resilient
- **Participate** in a street-mapping activity to learn about the unique assets in your neighbourhood

Learn more and register for free: neighbourlab.com/workshops

Summary

- The City continues to work on earthquake preparedness across all departments
- Risk assessments are being updated in partnership with the academic and scientific community as new information and modelling tools become available
- A large focus of the past 18 months has been on the VanSlam earthquake exercise, driving a significant amount of planning, training, and development of support tools and systems
- The updated risk assessments and post-exercise review will drive continuous improvement throughout the City over the coming years
- The public are invited to engaged with community resilience through the upcoming Neighbourhood Resilience Walks during Emergency Preparedness Week