



**Regional District of
Kootenay Boundary**



Adapting to Uncertainty
- Building a Resilient Future -

AKBLG 2022

Looking back to the future- by the numbers



RDKB
119

5 Year Average number of days the EOC is activated

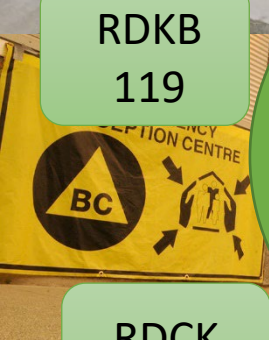


5 Year Average EOC activation Costs



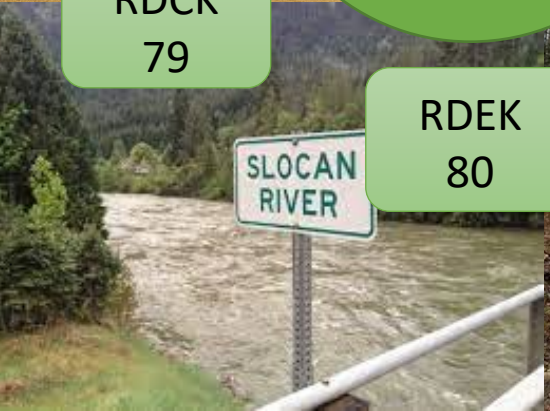
Number of staff in emergency management program

RDKB
2.5



RDCK
79

RDEK
80

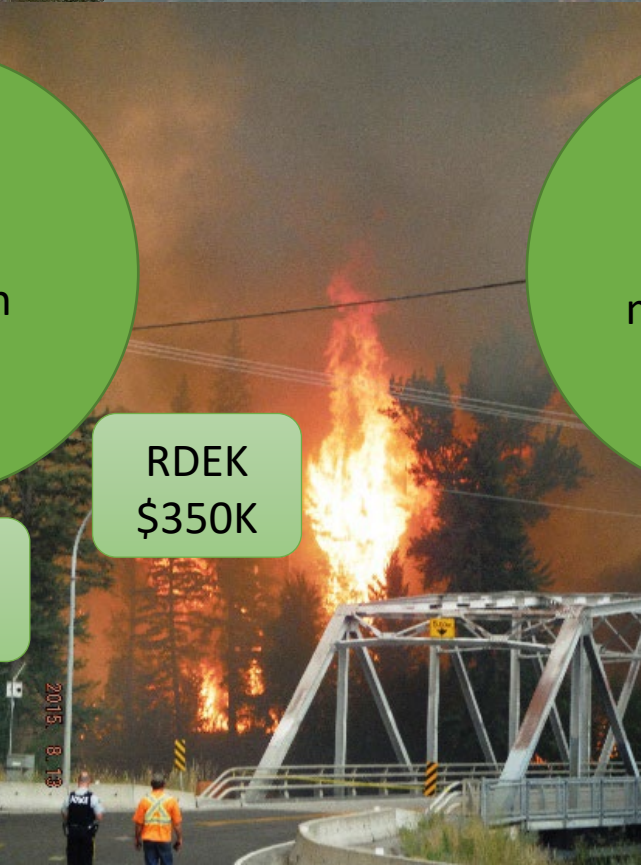


RDKB
\$1.8 Mil

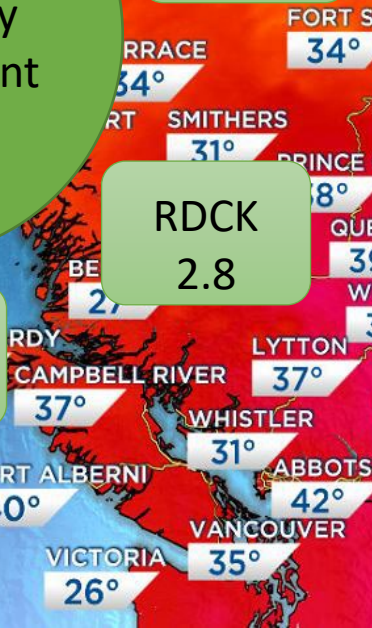
RDCK
\$380K



RDEK
\$350K



RDEK
3



RDCK
2.8

What will our Future look like?

- Increased climate related events
- Difficulty forecasting weather events
- Changes to frequency of events
- More People needing assistance - greater unmet needs response



Satellite image ©2021 Maxar Technologies



Satellite image ©2021 Maxar Technologies



Temperature Projections

- Annual average⁷⁴
 - + 1.6°C by 2020s
 - + 3.2°C by 2050s
 - + 5.3°C by 2080s*BASELINE of 2.5°C⁷⁵*
- Annual frost-free days⁷⁶
 - + 24 days by 2020s
 - + 49 days by 2050s
 - + 82 days by 2080s*BASELINE of 155*
- Growing degree-days⁷⁷
 - + 266 days by 2020s
 - + 580 days by 2050s
 - + 1,019 days by 2080s*BASELINE of 969*



Extremes

- Days per year over 25°C are expected to occur more than twice as often by 2050.
BASELINE of 19 days per year
- 17% increase in "1-in-20 hottest day" temperature by 2050.⁸³
BASELINE of 31°C
- Days with heavy rain⁸⁴ are expected to occur up to 25% more often.
- 30% more of the rain falling will fall in heavy rain events.



Social Emergencies

Scenario

- Single family house fire: 2 Adults, 2 Kids, 1 Dog





Future - Are we ready?

Not really...

- Climate change + social vulnerability = increased response, increased draw on resources, reduced livability.
- Current EM programs are focused on preparedness & response
- EM staff bear the brunt – mental & physical health
- Limited support from levels of government

So what do we do? How do we do it?

We build
Resilience.
Obviously.

What is resilience?

The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

United Nations Office for Disaster Risk Reduction

[Undrr.org/terminology/resilience](https://undrr.org/terminology/resilience)

But how do
we build
Resilience?

PART 1 - We do our part (authority)

- Limit the problem: no floodplain bylaw exemptions, wildfire DPAs, etc

Stop creating new risks when we don't have the capacity to manage existing risks

- Solutions for our repeat offenders: flood mitigation, warning systems, FireSmart, etc...

Reduce the impact(s) of events when they occur

Building Resilience

- We keep nimble: the game is changing and we're uncertain how it will all pan out.

We are responsive and open to trying new ideas and opportunities

- Breaking down silos internally: all services need to be thinking about EM/ climate adaptation/ resilience.

All services have a part to play – ex. Rec centres able to host cooling centres



Building Resilience

Externally - Influence

- Clear expectations: our residents know who is doing what.

EM requires an all of society approach, but people need to know what that means

- Residents are informed: risk is known and prepared for.

It will take time to get people thinking like this again



Building Resilience

- We support Community led initiatives that increase resilience
 - *Watershed organizations*
 - *Neighbourhood emergency planning*
 - *Household wildfire resilience – FireSmart*
- We support not for profits
 - *Fields forward, KBFA – food security*
 - *KLP – ecosystem health*
- We support partnerships
 - *With other LGs & FNs*
 - *With outside agencies*

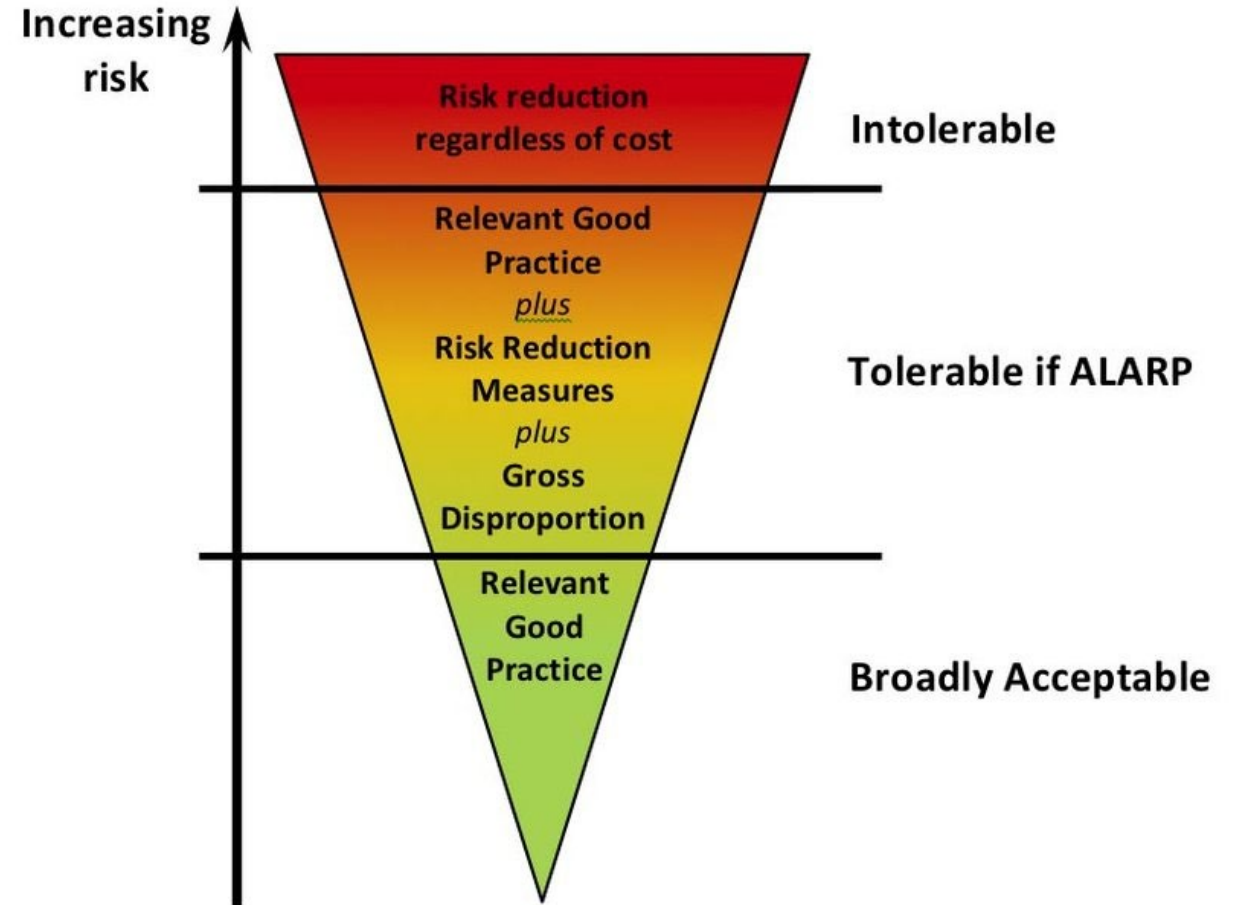


Residual Risk

Unreasonable and impractical to reduce risk to Zero.

Managing residual risk is important, but not perfect:

- Warning systems (liability)
- Preparedness (voluntary)
- Insurance (rates are climbing)



Sendai Framework for Disaster Risk Reduction

1 OUTCOME

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

1 GOAL

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

4 PRIORITIES

Understanding disaster risk

Strengthening disaster risk governance to manage disaster risk

Investing in disaster risk reduction for resilience

Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction

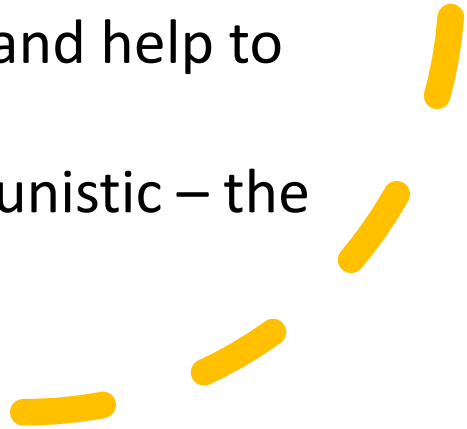
7 TARGETS

- ↓ DISASTER MORTALITY BY 2030
- ↓ NUMBER OF AFFECTED PEOPLE BY 2030
- ↓ ECONOMIC LOSS BY 2030
- ↓ INFRASTRUCTURE DAMAGE BY 2030
- ↑ DRR NATIONAL/LOCAL STRATEGIES BY 2020
- ↑ INTERNATIONAL COOPERATION BY 2030
- ↑ EWS AND DR INFORMATION BY 2030

Emergency Program Act Modernization

- Current Act is outdated (35 years)
- Anticipate:
 - Increased focus on mitigation
 - Legislative requirement for risk assessments and comprehensive emergency response/recovery plans
 - UNDRIP integration
- Timing – Spring 2023
- Will our current programs meet all legislated requirements under the new EPA?

Key Takeaways

- Increase in frequency, severity and duration of emergency events
 - Climate change projections confirm this trend will likely continue
 - Impacts are becoming more far-reaching: physical, economic, social
 - Must build resilience by working together – shared responsibility
 - Avoid creating new risks when we lack the capacity to manage existing risks
 - Be diligent and creative in managing residual risks
 - Leverage grant funding opportunities and help to shape them
 - Be adaptable, cooperative and opportunistic – the future is unknown
- 



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Thank you