

SURVEILLANCE FOR AMPHIBIAN MASS MORTALITIES IN BRITISH COLUMBIA (SAMM B.C.)



In British Columbia, 64% of the frog species and 30% of the salamander species are listed as species of conservation concern. **Emerging Infectious Diseases (EID)**, such as the chytrid fungus, *Batrachochytrium dendrobatidis (Bd)*, are causing mass mortality of amphibians in many parts of the world. Other pathogens and parasites have greater impact when combined with environmental stressors such as pollution and habitat degradation. There is little information on the status of these organisms or their impacts on amphibian populations in B.C.. We need this information to plan management and recovery strategies for these species.



GUIDELINES FOR REPORTING AMPHIBIAN MASS MORTALITIES

- A mass mortality event is when **many amphibians die at the same time at a site**.
- If you observe an amphibian mass mortality event, please **contact the numbers listed below** immediately. If you are unable to speak directly to a person, please leave a detailed message. Because a quick response is essential, you could also contact your Regional Species-at-Risk (SAR) Biologist. Contacts can be obtained through Enquiry B.C. Use the map overleaf to identify your region.
- To document the event accurately **please fill out the attached amphibian mass mortality data form**.
- The data form can also be printed from the B.C. Frogwatch website and the B.C. Wildlife Health website (address below)
- When you contact us, we can **assess if specimen collection is warranted** and will provide **further information on specimen collection and shipping**.
- If the location of the mass mortality event is remote and the carcasses are not too rotten, then specimens can be collected and stored in double plastic bags. Use disposable gloves or an inverted plastic bag to pick up the carcasses. Keep specimens as cold as possible until you are able to contact us.
- As a general practise, thoroughly wash hands with soap and water after specimen collection although none of the amphibian diseases pose a risk to human health.
- The **specimen bags should be clearly labelled** with an attached tag stating date of collection, location, and species, and your name and contact information.
- If specimen collection is not possible, **please document the event by filling out the data form** and by photographing the sick/dead animals and the field setting.



REPORT AMPHIBIAN MASS MORTALITIES TO B.C. MINISTRY OF ENVIRONMENT

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www.env.gov.bc.ca/wld/frogwatch

B.C. Wildlife Health

www.env.gov.bc.ca/wld/wldhealth.html



Enquiry B.C. 1 800 663 7867

This project is a collaboration between the B.C. Ministry of Environment, B.C. Ministry of Agriculture and Lands, Animal Health Laboratory (Dr. S. Raverty), Environment Canada (Dr. C. Bishop and Mr. B. Pauli) and the Center for Coastal Health (Dr. J. Parmley).



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Please fill in as much of this form as you can and return it to us at the address below

Name:					
Address:					
Telephone No.:			Email address:		
LOCATION INFORMATION					
Location Name		Region or nearest town		Date and time	
Latitude/UTMN		Longitude/UTME		UTM Zone Datum	
WEATHER CONDITIONS (CHECK THE APPROPRIATE BOX)					
Cloud cover	Clear	Scattered cloud <50%	Scattered cloud >50%	Unbroken cloud	
Wind	Calm	Light air (2-5 km/h)	Leaves rustle (6-12 km/h)	Twigs move constantly (13-19 km/h)	
	Small branches move, dust rises (20-29 km/h)		Small trees sway (30-39 km/h)	Large branches moving, wind whistling (>40 km/h)	
Precipitation	None	Fog	Misty drizzle	Drizzle	Light rain
	Hard rain	Snow			
SITE DESCRIPTION					
Site type (check box)	River	Stream	Lake	Isolated Pond	Terrestrial
Site Size	Width:	Length:	Depth:		
For terrestrial sites Indicate % cover	Forest	Shrub and bushes	Grassland	Urban/rural	Other (specify)
For wetland sites indicate substrate % cover (best estimate)	Fines (<0.5mm)	Muck (< 1mm)	Fine detritus (1-5 mm)	Coarse detritus (5-150 mm)	Sand (0.5-2mm))
	Small gravel (3-10 mm)	Large gravel (11-100 mm)	Cobble (101-300 mm)	Boulder (>300mm)	Bedrock (unbroken)
	Wood	Mineral soil / mud	Emergent vegetation	Submergent vegetation	Other (specify)
HUMAN USE ON SITE					
Human Presence (check box)	No evidence of human use	Some evidence of human use but no obvious impact		Evidence of heavy human use and impact	
Wetland use (check box)	Recreational fishing/boating	Swimming	Water supply	No obvious human use	Other (specify)
Upland use (100 m radius) (Indicate %)	Residential/ Urban(specify)	Agriculture/ Grazing (specify)	Logged forest	Undisturbed ecosystem	Other (specify)
BIOLOGICAL COMMUNITY					
List native fish, birds, water birds, reptiles, amphibians that you observe at the site.					
List introduced species that you observe, including bullfrogs, introduced fish or plants					

DETAILS OF AMPHIBIAN MORTALITY						
Are the amphibians showing signs and symptoms of disease or distress? If yes, circle any of the boxes below that apply					No	
					Yes	
Sloughing skin	Discoloured skin	Bleeding / burst blood vessels	Marks or blemishes	Sores or ulcers	Eye problems	
Thin/emaciated	Bloated	Contorted/spasms	Burst abdomens	Protruding tongue	General lethargy	
Additional notes of symptoms and condition of animals						
When did the current amphibian mortality event start?			Date	Start unknown		
Is the current amphibian mortality event continuing?			Yes	No		
If it has ended, when did it end?			Date	End unknown		
How many dead amphibians have you seen at this site so far this year? Please indicate if you counted all the dead amphibians or if you estimated the number.						
Do you see any obvious reasons for the mass mortality? E.g., signs of predators, unusual weather, chemical spills, road traffic, fishing, hunting, etc.						
Have you seen dead amphibians at this site before, in previous years? If yes, when, which species and how many each year?						
In your opinion is the amphibian population in your pond increasing, decreasing, staying the same or trend not known						
ADDITIONAL COMMENTS						
Indicate additional site information, human use, and if photographs were taken, samples collected, etc.						

Thank you for completing this questionnaire

THE INFORMATION WILL BE COMPILED BY THE B.C. WILDLIFE HEALTH PROGRAM

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