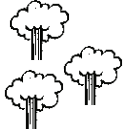
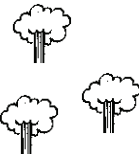
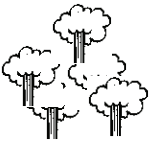

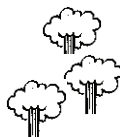






# Tongariro Eruption Sequence

## TIMELINE

	Precursors	Event	Pauses
<b>1-Mar</b>	No precursory activity, building up of a baseline of background activity		none
<b>15-Mar</b>	Short HF swarms and shallowing of earthquakes in general		none
<b>1-Apr</b>	Presence of LF EQs and increasingly closer swarms of HF could indicate unrest. CO2 elevated from Apr 2 onwards. Phreatic events could indicate unrest	 3 phreatic events	Apr 2, 20:00 30 mins Press C
<b>15-Apr</b>	Increasing number of total quakes per day (frequency), EQs shallowing continues, SO2 elevated dramatically and CO2 continues to rise	 3 phreatic events, with column <1km to 1.2km	Apr 22, 08:00 20 mins Interview
<b>1-May</b>	Earthquakes getting shallower, and increasing in magnitude. More frequent LF. CO2 and SO2 increasing, steadily until May 9, where mega spike in SO2	 5 phreatic events, with small column heights <1km.  May 12 -1st magmatic event, 5km height, Vulcanian, winds are from the S	May 12, 20:00 30 mins Press C
<b>15-May</b>	Seismic network down on May 12 till 18th. Higher magnitude and deeper EQs occurring. Steady increase in gases. Mid-May - slight increase in tilt and deformation. Late May - sudden increase in tilt and deformation data. Phreatic eruptions continue	 3 phreatic events, 1-1.5 km heights. EQs causing some distress in Turangi.	none
<b>1-Jun</b>	Deformation and tilt becoming more dramatic and visible. Further seismic unrest, phreatic eruptions continue, and magmatic eruptions are scaling up. June 3,4. Fumaroles and a lava dome is visible. Lava dome grows.	 May 31 - Cracks in Red Crater. June 3 - 2nd eruption, 2 km height	June 1, 16:00 10 mins Media Release
<b>10-Jun</b>	Lava dome continues to grow. June 13 and 14 - major changes to SO2 and CO2. LF and Tremor EQs occurring prior to June 15 eruption.	 June 10 - 3rd eruption (45 mins duration, 5.5km high).  June 12 - 4th eruption (1.5 hr duration), 9km height. Pyroclastic flows. Rain follows event. June 15 (8am) - Catastrophic eruption. 23 km height, duration of 4.5 hrs. event, triggers ashcloud lightning. Very significant ashfall in region. 1.5 metres in Turangi 	June 11, 8:00 25 mins Meeting  June 15 8:00 PAUSE, watch Newsfeed  30 mins prep for Press C