Table 2. Color-code for increasing levels of volcanic unrest in Long Valley Caldera and the Mono-Inyo Craters region and the attendant U.S. Geological Survey (USGS) response. See figure 5 for calldown structure. LP, long period; VLP very long period; RSAM real-time seismic amplitude measurement; M, magnitude; LVO, Long Valley Observatory.

<table>
<thead>
<tr>
<th>ACTIVITY LEVEL</th>
<th>GEOLOGIC BEHAVIOR</th>
<th>USGS RESPONSE</th>
</tr>
</thead>
</table>
| CONDITION GREEN – No Immediate Risk| **Background or Quiescence**
  Background typically includes several M~2 earthquakes/day with 10-20 smaller events and CO₂ emissions at Mammoth Mtn < 500 t/day | Normal operations                                  |
| Weak Unrest                        | Any of the following with strain rates < 0.1 ppm/day or displacements < 1 mm/week and CO₂ emissions < 500 t/day
  - At least 1 M ≥ 3 event/day (may be locally felt), 5 M ≥ 2 events/day, or 30 M ≥ 1 events/day.
  - A swarm with > 20 M ≥ 1 events/hr
  - Sudden onset of seismicity in a new area | Discretionary information calls to project scientists and or local authorities as appropriate |
| Minor Unrest                       | Any of the following with strain rates < 0.1 ppm/day or displacements < 1 mm/week and CO₂ emissions < 500 tons/day
  - A swarm and at least 1 M ≥ 3.5/day, 5 M ≥ 2.5/day, or 30 M ≥ 1.5 events/day
  - More than 20 M ≥ 1 events/hr for > 3 hrs
  - More than 100 M ≥ 1 events/day | Information calls to project scientists and discretionary information calls to local authorities as appropriate. |
| Moderate-to-Strong Unrest          | Any combination of the following:
  - A swarm and at least 1 M ≥ 4 earthquake/day, 5 M ≥ 3 events/day, or 30 M ≥ 2 earthquakes/day
  - 500 M ≥ 1 earthquakes/day (avg. > 20 M ≥ 1 earthquakes/hr for 24 hrs)
  - 5 shallow (<5 km) LP earthquakes/day
  - 5 shallow (<5 km) VLP earthquakes/day
  - 5 minutes of shallow (<5 km) harmonic tremor with RSAM amplitudes > 50 on > 2 stations
  - Strains > 0.1 ppm/day or displacements > 5 mm/week
  - CO₂ emissions > 500 tons/day | Information calls to project scientists, California Office of Emergency Services (OES) and local authorities.
  A “heads up” call-down if increasing activity rates approach the criteria for condition YELLOW (see below). |
<table>
<thead>
<tr>
<th>CONDITION YELLOW (WATCH)</th>
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<tbody>
<tr>
<td>ACTIVITY LEVEL</td>
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<tr>
<td>Intense Unrest</td>
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<tr>
<th>CONDITION ORANGE (WARNING)</th>
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<tbody>
<tr>
<td>ACTIVITY LEVEL</td>
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<tr>
<td>Accelerating Intense Unrest: ERUPTION LIKELY within hours to days</td>
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<tr>
<td>ACTIVITY LEVEL</td>
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<tr>
<td>----------------</td>
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</tbody>
</table>
| LEVEL 1: Minor eruption underway | Eruptive activity characterized by any of the following:  
  - Small explosive blasts (either phreatic or magmatic)  
  - Effusive lava fountains feeding fluid lava flows  
  - Dome growth  
  - Eruption column, if present, may reach 1 km above vent elevation  
  - Hazardous zone subject to ballistic ejecta or small pyroclastic flows generally limited to 1 to 2 km from eruption vent(s). Minor down-wind ash fall possible | Call-down notification of change to condition RED  
EVENT RESPONSE (if not already in effect under conditions YELLOW or ORANGE).  
  - Implement LVO EVENT RESPONSE structure (Figure 10)  
  - Establish LVO field office in Mammoth Lakes  
  - Establish LVO backup field office in Bridgeport  
Communicate changes in eruption levels and associated hazard zone to civil authorities through daily to hourly updates. |
| LEVEL 2: Moderate eruption underway | Explosive eruptive activity characterized by  
  - Eruption column 2 to 5 km above vent(s)  
  - Hazardous zone subject to pyroclastic flows or surges as far as 5 km from eruption vent(s).  
  - Light to moderate down-wind ash fall |  |
| LEVEL 3: Strong eruption underway | Explosive eruption characterized by  
  - Eruption column 5 to 15 km above vent(s)  
  - Hazardous zone subject to pyroclastic flows or surges as far as 10 km from eruption vent(s).  
  - Ash cloud may intersect some commercial aircraft flight paths over region  
  - Moderate to heavy down-wind ash fall |  |
| LEVEL 4: Massive eruption underway | Explosive eruption characterized by  
  - Eruption column reaching or exceeding 25 km above eruption vent(s)  
  - Hazardous zone subject to pyroclastic flows or surges may extend 20 km or more from eruption vent(s).  
  - Ash cloud pervades most aircraft flight paths over the region  
  - Heavy down-wind ash fall. |  |