

How do we determine dam failure emergency?

Event	Situation	Emergency level*
Earth spillway flow	Reservoir water surface elevation at auxiliary spillway crest or spillway is flowing with no active erosion	1
	Spillway flowing with active gully erosion	2
	Spillway flow that could result in flooding of people downstream if the reservoir level continues to rise	2
	Spillway flowing with an advancing headcut threatening the control section	3
	Spillway flow that is flooding people downstream	3
Embankment overtopping	Reservoir level is 1 foot below the top of dam	2
	Water from the reservoir is flowing over the top of dam	3
Seepage	New seepage areas in or near dam	1
	New seepage areas with cloudy discharge or increasing flow rate	2
	Seepage with discharge greater than 10 gallons per minute	3
Sinkholes	Observation of new sinkhole in reservoir area or on embankment	2
	Rapidly enlarging sinkhole	3
Embankment cracking	New cracks in embankment greater than ¼-inch wide without seepage	1
	Cracks in embankment with seepage	2
Embankment movement	Visual movement/slippage of embankment slope	1
	Sudden or rapidly proceeding slides of embankment slopes	3
Instruments	Instrumentation readings beyond predetermined values	1
Earthquake	Measurable earthquake felt or reported on or within 50 miles of the dam	1
	Earthquake resulting in visible damage to the dam or appurtenances	2
	Earthquake resulting in uncontrolled release of water from dam	3

Security threat	Verified bomb threat that, if carried out, could result in damage to dam	2
	Detonated bomb that has resulted in damage to dam or appurtenances	3
Sabotage/ vandalism	Damage to dam or appurtenance with no impacts to functioning of the dam	1
	Modification to the dam or appurtenances that could adversely impact functioning of the dam	1
	Damage to dam or appurtenances that has resulted in seepage flow	2
	Damage to dam or appurtenances that has resulted in uncontrolled water release	3

- * Emergency Level 1: Nonemergency unusual event, slowly developing
- * Emergency Level 2: Potential dam failure situation, rapidly developing
- * Emergency Level 3: Urgent; dam failure appears imminent or is in progress

Sources for this publication were the Natural Resources Conservation Service and Association of State Dam Safety Officials (*Emergency Action Plans*)

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