Downstream Hazard

The downstream hazard is based solely on potential downstream impacts to life and property should the dam fail when operating with a full reservoir. This hazard is not related to the condition of the dam or its appurtenant structures. The definitions for downstream hazard are borrowed from the Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures (FEMA P-946, July 2013). FEMA categorizes the downstream hazard potential into three categories in increasing severity: Low, Significant, and High. DSOD adds a fourth category of "Extremely High."

Downstream Hazard Potential Classification	Potential Downstream Impacts to Life and Property
Low	No probable loss of human life and low economic and environmental losses. Losses are expected to be principally limited to the owner's property.
Significant	No probable loss of human life but can cause economic loss, environmental damage, impacts to critical facilities, or other significant impacts.
High	Expected to cause loss of at least one human life.
Extremely High	Expected to cause considerable loss of human life or would result in an inundation area with a population of 1,000 or more.

Condition Assessment

DSOD uses the US Army Corps of Engineer's National Inventory of dams' condition assessment rating definitions (updated 2021) in assigning condition assessments.

A dam safety deficiency is defined as a load capacity limit or other issue that can result in a failure of the dam or appurtenant structure. It is a characteristic or condition that does not meet the applicable minimum regulatory criteria.

Normal operations are defined as loading on the dam resulting from day-to-day pool operations to achieve authorized purposes in accordance with minimum state or federal regulatory criteria.

Condition Assessment definitions, as accepted by the National Dam Safety Review Board, are as follows:

Ratings	Definitions from the National Inventory of Dams
Satisfactory	No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the minimum applicable state or federal regulatory criteria or tolerable risk guidelines. Typical Circumstances: • No existing deficiencies or potentially unsafe conditions are recognized, with the exception of minor operational and maintenance items that require attention. • Safe performance is expected under all loading conditions including the design earthquake and design flood. • Permanent risk reduction measures (reservoir restrictions, spillway modifications, operating procedures, etc.) have been implemented to eliminate identified deficiencies.
Fair	No existing dam safety deficiencies are recognized for normal operating conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action. Note: Rare or extreme event is defined by the regulatory agency based on their minimum applicable state or federal criteria. Other Circumstances: • Lack of maintenance requires attention to prevent developing safety concerns. • Maintenance conditions may exist that require remedial action greater than routine work and/or secondary studies or investigations. • Interim or permanent risk reduction measures may be under consideration.

Poor	A dam safety deficiency is recognized for normal operating conditions which may realistically occur. Remedial action is necessary. Poor may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency. Investigations and studies are necessary. Other Circumstances: • Dam has multiple deficiencies or a significant deficiency that requires remedial work. • Lack of maintenance (erosion, sinkholes, settlement, cracking, unwanted vegetation, animal burrows, inoperable outlet gates) has affected the integrity or the operation of the dam under normal operational conditions and requires remedial action to resolve. • Critical design information is needed to evaluate the potential performance of the dam. For example, a field observation or a review of the dam's performance history has identified a question that can only be answered by review of the design and construction history for the dam. Uncertainty arises when there is no design and/or construction documentation available for review and additional analysis is needed to better understand the risk associated with operation under normal operational conditions. • Interim or permanent risk reduction measures may be under consideration.
Unsatisfactory	A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution. Typical Circumstances: • A critical component of the dam has deteriorated to unacceptable condition or failed. • A safety inspection indicates major structural distress (excessive uncontrolled seepage, cracks, slides, sinkholes, severe deterioration, etc.), advanced deterioration, or operational deficiencies which could lead to failure of the dam or its appurtenant structures under normal operating conditions. • Reservoir restrictions or other interim risk reduction measures are required. • A partial or complete reservoir drawdown may be mandated by the state or federal regulatory agency.
Not Rated	The dam has not been inspected, is not under state jurisdiction, or has been inspected but, for whatever reason, has not been rated.