Massachusetts State Hazard Mitigation and Climate Adaptation Plan
State Agency Vulnerability Assessment Reference Materials:
Dam Failure

Data Source: 2018 State Hazard Mitigation and Climate Adaptation Plan - DRAFT

The map below shows the location of the 330 dams in the Commonwealth considered to be "high hazard" (based on the potential impacts of failure, not the likelihood) as of 2017. There are a number of ways in which climate change could alter the flow behavior of a river or impoundment area, causing conditions to deviate from what the dam was designed to handle. For example, more extreme precipitation events could increase the frequency of intentional discharges. Many other climate impacts – including shifts in seasonal and geographic rainfall patterns – could also cause the flow behavior of rivers to deviate from previous hydrographs. When flows are greater than expected, spillway overflow events (often referred to as "design failures") can occur. These overflows result in increased discharges downstream and increased flooding potential. Therefore, although climate change will not increase the probability of catastrophic dam failure, it may increase the probability of design failures and the flooding that can result. Maps and data on future conditions related to the dam failure hazard are not available; however, climate change is not likely to change which dams would have the biggest impacts from catastrophic failure. Therefore, the present-day map is a useful reference when considering future conditions for this hazard.

Present-Day Conditions