Fact Sheet
Dam Safety

February 2017

What is a Dam?

A dam is defined by KRS 151 as any artificial barrier that is 25 feet in height, measured from the downstream toe to the crest of the dam, or has the ability to impound fifty (50) acre-feet or more at the maximum water storage elevation.

Existing Dams

KRS 151.293, Section 6, authorizes the Energy and Environment Cabinet to inspect existing structures that meet the definition of a dam. The Dam Safety and Floodplain Compliance Section of the Water Infrastructure Branch maintains a list of these structures in an inventory database. In determining the frequency of inspection of a particular dam, the cabinet takes into consideration the size and type, topography, geology, soil condition, hydrology, climate, use of the reservoir, the lands lying in the floodplain downstream and the hazard classification of the dam.

Dam Classifications

High Hazard **(C)**
Structures located such that failure may cause loss of life or serious damage to houses, industrial or commercial buildings, important public utilities, main highways or major railroads.

Moderate Hazard (B)
Structures located such that failure may cause significant damage to property and project operation, but loss of human life is not envisioned.

Low Hazard (A)
Structures located such that failure would cause loss of the structure itself but little or no additional damage to other property. High and moderate hazard dams are inspected every two years. Low hazard dams are inspected every five years. If the structure meets all the requirements, a certificate of inspection is issued to the owner. Otherwise, the owner is notified of any deficiencies.

New Dams

Depending on the type of dam, periodic inspections are performed during the construction of a new dam. A final inspection is performed when the construction is complete and as-built drawings are submitted. If the dam is constructed according to the plans and specifications, a letter is issued approving the impounding of water. The dam is then added to the inventory database.

Dam Safety and Floodplain Compliance Section

Staff with the Dam Safety Section and Floodplain Compliance Section periodically inspects all dams on the inventory as long as they continue to operate (approximately 300 dams each year).

Each inspection starts with a complete file review in the office to note any identified deficiencies and to become familiar with hydrologic evaluations. The inspector then performs the field evaluation.

In the field, the inspector conducts a complete visual inspection. Surveys are completed for dams with missing measurements. Photographs help provide a permanent record of observations. Following the inspection, a letter and report are provided to the owner listing the observations and, if needed, deficiencies and remedial measures required. Enforcement action is sometimes required to ensure proper dam maintenance or modification.

The section takes emergency action if a structure is in danger of failing and poses a threat to life or may cause serious property damage. The Dam Safety and Floodplain Compliance Sections are equipped with siphon pipes and pumps to help an owner drain water from a reservoir in an emergency. KRS 151.297 empowers the Energy and Environment Cabinet to take emergency action if an owner abandons a dam or refuses to take necessary action.