

What should you consider when thinking of removing a dam?

Kansas has more than a hundred thousand dams. The great majority of dams in the U.S. are more than 50 years old. While the age of a dam is not necessarily a direct indicator of its condition, it is indirectly an indicator that these dams were built for a certain life expectancy or not built to the standards of today. They also may have been inadequately maintained, outlived their purpose, require costly repair, or have another reason that makes removal more cost effective than repair, regular inspections, and maintenance. Before making any decision to possibly remove your dam, it's advisable to gather needed information involving legal ownership, engineering analysis, regulations, and other relevant concerns to assess outcomes.

During the decision making regarding possible removal, you will need to contact individuals and organizations affected by the removal of the dam. For instance, if the dam serves as an embankment for a road or corridor for a pipeline, discuss removal with these stakeholders. Removal, too, may increase downstream depth and flooding frequency or alter a stream's channel course. Any of these results can significantly change applicable Flood Insurance Rate Maps, too. Therefore, contact local floodplain administrators who have the responsibility of reviewing floodplain modifications within their jurisdictions.



Because excavation and construction on the site as well as an emptied reservoir can lead to erosion, be prepared to control sediment and prevent erosion during removal. Accumulated sediment also may have been contaminated by agricultural or industrial operations upstream. If this is a possibility, have the sediment analyzed as part of your remediation plan needed for removal.

Considerations. The following are questions you might ask when considering dam removal:

Current use: What purpose does the dam serve? Flood control? Power? Road crossing? Irrigation? Waste disposal? Impoundment for reservoir? Is there sufficient rainfall to maintain the reservoir?

Structural integrity: What has a licensed engineer concluded after inspection? How old is the dam? What is its expected life span? Is the dam at risk of failure?

Ownership: Is it possible to transfer ownership of the dam to another desiring to maintain it? Are all owners in agreement? Have you contacted those who have an easement to the property or legal commitment to maintaining the dam or reservoir? Does anyone else have water right permits associated with the reservoir?

Liability and safety issues: If the dam failed, would lives and property be at danger? Is trespassing a problem? Is the dam classified as significant or high hazard and requires state-mandated inspections?

Impacts: Will other infrastructure be affected? Is the dam of historical significance? Are nearby property owners and the community in support of the decision? Would property values change? What would be

the environmental impact, e.g., wetlands, fish passage, excessive sediment, etc.? How will you dispose of excessive sediment? Are there any possible contaminants in the soil?

Permits and regulations: What agencies have regulatory authority over removal? Have you contacted the Kansas Division of Water Resources? Will you need a permit from the Kansas Department of Health and Environment or US Corps of Engineers, e.g., Clean Water Act, Section 404 permit involving sediment? Does your county or municipality require permits, approvals, or notifications? Have you been instructed to remove the dam by a local, county, or state organization? *Note: The Division of Water Resources chief engineer does have the authority to require owners to submit plans to breach or completely remove a dam that threatens public safety.*

Costs: How much is the cost of maintenance, inspection, and repair? What is the cost of removal (for example, plans, permits, construction)? Have you factored in the costs of stream restoration? Sediment removal? Are there property value changes? Is there a state or federal financial assistance programs?

Before deciding to remove the dam, contact the Water Structures Department at the Division of Water Resources that may require a permit for safe removal. Smaller stream obstructions also might require permitting during removal, so check with DWR in these instances, also. Dam removal does require the services of a licensed engineer who will submit the permit, plan, drawings, and other needed material to DWR before removal.

