

This table provides a summary of the alternatives explored and criteria considered by the Department of Natural Resources when deciding the appropriate course of action to take regarding the deteriorating Grindstone River dam in Hinckley. The Department has recently made the decision to move forward with removal of the dam, restoring the river to its natural condition.

	Selected action - Dam removal	Alternative 1 considered: Full pool rapids (“rock arch rapids”)	Alternative 2 considered: Reconstruction of dam
Safety	Hydraulic roller (“drowning machine”) eliminated	Hydraulic roller eliminated	Design will need to prevent development of a hydraulic roller
	Failure hazard eliminated	Failure hazard still present at earthen berm though flood capacity would be increased	Failure hazard remains
Ecological Impact	Allows for passage of fish and wildlife	Allows for passage of fish and wildlife	Does not allow for passage of fish and wildlife
	Sediment transport restored to entire stream reach in project area	Sediment transport unchanged in reservoir (continued sediment accumulation)	Sediment transport unchanged in reservoir (continued sediment accumulation)
	Provides spawning habitat, restores natural stream features that provide habitat diversity throughout reestablished stream reach	Continues to inundate natural riverine and spawning habitat; provides some spawning habitat, step-pool habitat, and a deep pool at the base of the rapids	Continues to inundate naturally riverine and spawning habitat and block passage to upstream habitat
Recreation	Reservoir replaced by a free-flowing river	Reservoir recreation	Reservoir recreation
	River connected for all paddlers; river flows restored to move sediment and improve channel dimensions throughout reservoir	River connected for skilled paddlers, rapids for skilled/adventurous whitewater paddling; other paddlers could portage around the rapids	Paddling will continue to involve portaging around the structure
	Improved angling in stream due to fish passage and restored, diverse stream habitat	Improved angling in reservoir and rapids due to fish passage	No improvement in upstream angling
Infrastructure	Design can likely accommodate infrastructure	This option would require berms along the river banks to contain the rapids. These berms would extend onto downstream private lands.	Design can likely accommodate infrastructure

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Costs and Funding	Project Cost Estimate: \$455,000 - \$600,000	Project Cost Estimate: \$900,000 - \$1,000,000	Project Cost Estimate: \$1,200,000- \$1,500,000
	Funds Available: \$600,000	Funds Available: \$600,000	Funds Available: \$500,000 (not eligible for Lessard-Sams Outdoor Heritage funds)
	Funding Expiration Date: Dam Safety - December 2022 and LSOH Funds June 2020	Funding Expiration Date: Dam Safety - December 2022 and LSOH Funds - June 2020	Funding Expiration Date: Dam Safety - December 2022
	Long Term Costs: \$1000/annually to operate rearing ponds at the hatchery	Long Term Costs: Minimal to no costs to maintain structure	Repair and dam maintenance will be ongoing. Past repair cost below (costs do reflect inflation) 2014 repair - \$70,000 construction + \$6,000 engineering 1993 repair - \$2,000 construction 1985 repair – \$52,000 construction + engineering 1976 repair - \$5,000 construction
History	Will restore pre-dam natural history of a free flowing river; options available for preserving history of the location	Will maintain recent history of a reservoir	Will maintain recent history of a reservoir
Technical feasibility	FEMA Requirements: Letter of map amendment (estimated at \$15,000 - can be waived due to environmental benefits)	FEMA Requirements: CLOMAR, LOMAR and modeling (estimated at \$60,000)	FEMA Requirements: none
	No rise	Will result in approximately a 4.7 ft rise in the FEMA cross section	Conditions remain the same
	Will not require downstream land acquisition	Will require earthen berms downstream on land that is privately owned (landowner has not been contacted)	Will not require downstream land acquisition
	No impact to utility line	Possibly a public utility line downstream that may be impacted	Impact to utility line will not change
Remaining information needed	*One private property owner parcel boundary *Permit process will determine ultimate feasibility and is initiated once course of action is selected (dam removal in this instance)		