

# **Appendix H-5**

Public, Agency, and Tribal Coordination  
Keystone Dam Safety Modification Study

March 2024

## **1 Introduction**

In accordance with 40 CFR 1501.7, 1503, and 1506.6, the USACE initiated public involvement and agency scoping activities to solicit input on the Keystone Dam Safety Modification Study, identify appropriate measures, and identify significant issues related to the project. The USACE began its public involvement process with a public scoping meeting to provide an avenue for public and agency stakeholders to ask questions and provide comments. This public scoping meeting was held on February 12, 2020 at the Case Community Center, 1050 W Wekiwa Road, Sand Springs, Oklahoma 74063. The USACE, Tulsa District, placed advertisements on the USACE webpage and social media prior to the public scoping meeting. A summary of categorized public comments and USACE responses can be found in Table 1.

**Table 1. Comments Received during the First Public Comment Period and the USACE Response**

Number of Related Comments	Comment Description	USACE Response
<b>Individual Public Comments</b>		
Two (2)	Interested in helping and attending any future meetings.	Noted. USACE appreciates public involvement and recommends the attendance of future meetings.
One (1)	Are there digital files in any format of the presentation charts, maps, or posters available for public use for those unable to attend the public meeting?	Noted. When documents become available for public review, they are posted online at the Tulsa District webpage.
One (1)	The presentation graphics show that the COE has completed a study(s) which identifies probable risks/impacts from overtopping and abutment failure, however there are no risks identified upstream or downstream of Keystone Dam.	Noted. The Dam Safety Modification Study (DSMS) has focused on identified risks and evaluated solutions to Keystone Dam and surrounding area.
One (1)	The presentation graphics seem to rank overtopping as more important than abutment failure (i.e. primary-secondary) without explanation.	Noted. Based on a USACE risk evaluation (Issue Evaluation Study) the overtopping is considered to have more risk than the abutment failure. Additional detail provided in Section 1 of the Draft Environmental Assessment.
One (1)	The presentation graphics don't define overtopping, and in the context that the discharge of record has been only one-third the maximum design discharge capacity (i.e. overtopping event means a	Noted. A more detailed description of overtopping can be found in Section 1 of the Draft Environmental Assessment.

Number of Related Comments	Comment Description	USACE Response
	catastrophic embankment destruction and downstream flow greater than or equal to 939,000 cfs – over three times that of 1986).	
One (1)	The presentation graphics hint at but do not define the probability of an overtopping event nor provide estimated parameters needed to effect overtopping.	Noted. A more detailed description of overtopping can be found in Section 1 of the Draft Environmental Assessment.
One (1)	The use of “3.72 inches of runoff” to characterize the 1986 releases to downstream areas in the Tulsa Metro Area is a huge understatement. Recommend using layman terms rather than “Flood Release of Record.”	Concur. The use of inches of runoff within the Keystone Dam basin may not be the most appropriate description of downstream releases. The USACE will update any future public presentations to better describe project discharge in common terms.
One (1)	Recommend including instructions as to what public comments should address as the vague information in the presentation precludes informed comments from laymen readers.	Concur. The USACE will update any future public presentations to better describe public comment requests in common terms.
One (1)	Recommend giving the abutment flow problems highest funding priority as it is a longstanding issue and should be corrected as soon as possible. Higher pool levels would create proportional pressure increases and greater risk of	Noted. The USACE must evaluate a wide range of flood risk conditions and alternatives. All alternatives will be evaluated based on their Effectiveness, Constructability, Cost Efficiency, Risk Transfer, Non-Breach Consequences, Social Effects, and Environmental Impacts.  The risk associated with left abutment seepage risk was reduced by USACE in Fiscal Year 2021 through the implementation of a filter berm.

Number of Related Comments	Comment Description	USACE Response
	embankment failure at abutments, etc.	
One (1)	Warning systems and procedures should be improved as technology allows but is not an inherent remedy to any problems addressed in this study.	Concur. A wide array of measures and alternatives were evaluated during the DSMS; it is assumed downstream communities would utilize advanced technology, warning systems, and features during flood events.
One (1)	Requests mountain biking trails established at Keystone Wildlife Management Areas like those in Northwest Arkansas to improve health and tourism, as opposed to the current use as a hunting area. Hunters have previously shot adjacent landowners' pets and signs posted on private fence.	Noted. The USACE understands the importance of recreation facilities at Keystone Lake; however, this is a DSMS and recreation measures will not be considered at this time.
One (1)	Recommend an intake and discharge tunnel be designed into one of the monoliths of the spillway expansion so that a hydroelectric generator can be installed asynchronous to the primary service station to power the dam and powerhouse during times when the station is not generating enough through the main power units. Installation of low flow turbines would also improve water quality downstream without changing the present operational charter for the	Noted. The intent of the DSMS is to evaluate the best methods of risk reduction for Keystone Dam.

Number of Related Comments	Comment Description	USACE Response
	lake which does not include water quality	
One (1)	Recommend not only preserving more water volume but also increasing flow capacity as inflows will increase with climate change.	Noted. Raising Keystone Dam as well as constructing an additional spillway were considered.
<b>Non-profit, Local, State, and Federal Agency/Organization Comments</b>		
<b>City of Sand Spring, Oklahoma</b>	Raising the dam and extending the abutments sounds like a plausible idea for future planning of the structure – as abutments are changed is it possible that the eddies would change as well causing erosion or safety issues?	Noted. During the Design Phase, USACE will incorporate features into the design that will protect against potential adverse impacts.
	Would not support releases that would cause damage to the levees in Sand Springs or flooding in Sand Springs.	Noted. A constraint considered during the Keystone DSMS is to avoid transfer or creation of risk which does harm to the public; and avoid, minimize, and/or mitigate impacts to the human environment.  Releases from Keystone Dam are dependent upon inflow into the reservoir and river conditions downstream of the reservoir.
	This project is the worst expenditure of public money that could be imagined. There are far more deserving things to spend resources on at this time. We are waiting on funds to put a low water dam in now that will far exceed anything this project will contribute. This project	Non-concur. The purpose of the DSMS is to identify whether there are unacceptable life safety risks associated with overtopping, instability of stilling basin slabs, and erosion downstream of the stilling basin of Keystone Dam.

Number of Related Comments	Comment Description	USACE Response
	could be kicked on down the road for a long time and use resources to answer needs of the present and future money would be better spent building on Arkansas than this concept.	
<b>Southwestern Power Administration</b>	Primarily concerned with the application of Section 1203 under Title XII of WRDA (1986), also known as the Dam Safety Act. Desires assurance that the join-use cost allocation assigned to the hydropower purpose, and thereby recovered by Southwest in its power rates to customers, will not be based on the total cost of the study. Section 1203 of the Dam Safety Act provides a reduced cost impact to the authorized project purposes when dam safety related work is necessary for public safety. Because the DSMS is the result of an updated Probable Maximum Flood, it is Southwestern's position that Section 1203 of the Dam Safety Act should be applied in this case.	Noted. The USACE will continue coordination with Southwestern Power Administration (SWPA) for the purposes of the cost share in relation to Section 1139 of PL 114-322 (WIIN Act), its associated 17 April 2019 Implementation Guidance (IG), and Section 1203(a) of the Water Resources Development Act of 1986 (WRDA1986) (33 U.S.C. §467n(a)).
<b>Town of Mannford, Oklahoma</b>	Adamantly opposed to any safety improvements to Keystone Dam that could potentially raise the level of the water that is retained by the dam. Aware that the reasoning used consider raising the level of the dam is supposed to only be used to	Noted. The USACE must evaluate a wide range of flood risk conditions and alternatives. All alternatives are evaluated based on their Effectiveness, Constructability, Cost Efficiency, Risk Transfer, Non-Breach Consequences, Social Effects, and Environmental Impacts.  The dam raise and new spillway were considered.

Number of Related Comments	Comment Description	USACE Response
	protect the dam in the event of a mega-flood. Believe that adding additional discharge capacity would be the preferred method of preparing for such a mega-flood.	
	Current policies result in loss of recreational areas at times and can become costly to the Mannford community. Is aware that these risks in the development of recreational areas in flood prone areas are not the priority of USACE. However, past flood retention levels have required sand-bagging some of our community's school buildings.	Noted. The alternatives considered do not change the operation of the project and the flooding experienced to date. The intent of the DSMS is to address extreme floods that may overtop Keystone Dam.
	Increasing the level of Keystone Lake's flood control pool could cause future officials to change current policies resulting in millions of dollars in damages and the complete loss of all Mannford school facilities.	Noted. There will be no change to the conservation or top of flood pool in the alternatives considered.
	Raising the lake level could cause the potential flooding of the Town's sewage treatment facilities which are on the shores of Keystone Lake. This could result in undesirable consequences for anyone on Keystone Lake and downstream on the Arkansas River.	Noted. There will be no change to the conservation or top of flood pool in the alternatives considered.

## ATTACHMENTS