BARNETT RESERVOIR
PEARL RIVER VALLEY
WATER SUPPLY DISTRICT

August 6, 2024

U.S. Army Corps of Engineers
Attention: Eric Williams, Chief, Environmental Branch, RPEDS
CEMVN-PDS, Room 136,
7400 Leake Avenue
New Orleans, LA 70118

Reference: Pearl River Basin, Mississippi Federal Flood Risk Management Project Draft Environmental Impact Statement

Dear Mr. Williams,

The staff of the Pearl River Valley Water Supply District (PRVWSD) has reviewed the Draft Environmental Impact Statement for the Pearl River Basin, Mississippi Federal Flood Risk Management Project. We have the following questions about the potential impacts of the proposed project on the Pearl River Valley Water Supply District and the Ross Barnett Reservoir:

1. At low flow (250 cfs), the typical water surface elevation (WSE) at the downstream side of the Barnett dam is 250.50 above MSL. This WSE makes inspection and repair of the downstream concrete aprons relatively simple. The Flood gate bays (outer 4 bays on each side) are at elev. 253.00 MSL. Dewatering the two center regulating bays requires dealing with only 6.5 feet of water. We understand that the proposed project would raise the low flow WSE at the downstream side of the dam to 256.50 MSL. This would leave the flood bay apron covered in water and the regulating bays under 12.5 feet of water. PRVWSD needs to be assured that, when it is necessary to inspect or repair the downstream apron areas, that the proposed project is designed such that it is possible to lower the WSE at the dam to elev. 250.50 MSL and that the authority which operates the new project agrees to do so upon being given adequate notification and to keep it there for as long as may be needed to complete inspections or affect repairs.

2. The PRVWSD requests similar assurance about being able to lower the WSE to perform inspections and affect repairs to the low flow sluice gates, which have a bottom elevation of 255.00 MSL.

3. The PRVWSD would like some information about the effects that the higher low flow WSE in the Pearl River below the dam would have on the potential for flash flooding on Brashear Creek.

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John G. Sigman, Executive Director

PRVWSD would like to see a detailed hydraulic analysis of Brashear Creek that allows us to assess the differences in WSE on Brashear Creek, under existing conditions and after construction of the CTO project, from its confluence with the Pearl River to the point where it crosses under the Natchez Trace Parkway. We want to be able to compare WSEs on Brashear Creek at the southeast corner of the Jackson Country Club property, at the O.B. Curtis water treatment plant, at the southwest corner of the Harbor Pines mobile home community, at Lake Harbor Drive, at Rice Road and at the Natchez Trace Parkway.

4. The PRVWSD has compared the Existing conditions WSEs for various flows contained in Table E5-11 of the DEIS with actual WSEs recorded at the dam during the February 2020 high flow event. It was found that, in most cases, where comparable flow rates exist, the Existing WSE listed in Table E5-11 are somewhat lower than the actual recorded WSEs. Only for the 5-year event was the Existing WSE in the table equal too, or below the recorded WSE. The recorded WSEs for the 10, 25 and 50-year events are all greater than the Existing WSEs in the table, by as much as 1.35 feet. The 2020 storm did not produce discharge flows high enough to compare to Existing flow rates higher than that produced by a 50-year storm. These differences could indicate that, at higher flow rates, the predicted CTO WSE values may be underestimated. See table below.

Table 5-11 Existing Q (cfs)	Table 5-11 Existing WSE	2020 Recorded Q (cfs)	Table 5-11 Existing WSE
83,350	281.50	78,360	281.99
70,290	278.90	72,460	281.65
54,850	277.30	55,220	279.55
44,430	276.30	48,190	277.39

5. PRVWSD wants to be assured that the proposed project will not require any modification to the existing operating procedures for the Barnett Reservoir.

6. PRVWSD understands that proposed uses of the lake created by the proposed project may increase the potential risk in the event of a dam breach at the Barnett Reservoir. In 2022, PRVWSD completed a Potential Failure Mode Analysis (PFMA) and a Semi Quantitative Risk Assessment (SQRA) for the Barnett dam. That process, which assesses the risks involved in a potential breach of the dam, revealed that the risk of loss of life resulting from a dam breach is very low, mainly because the floodway downstream of the dam is typically unoccupied. PRVWSD is concerned that recreational use of the proposed lake and possible development along its shoreline could increase this risk. PRVWSD recommends that a SQRA, or an equivalent risk assessment process, be completed to assess the potential increase in risk.

If you have questions, please contact Mark Beyea at 769-231-9371.

Adam Choate
Executive Director