South Carolina Department of
Natural Resources

Paul A. Sandifer, Ph.D.
Director
Alfred H Vang
Deputy Director for
Land, Water & Conservation Division

Postmarked 10/26/2000

October 26, 2000

Mr. Mike Buckley, P.E., Director
Technical Services Division
Federal Emergency Management Agency-Mitigation Directorate
500 C Street, SW
Washington, DC 20472

RE: Appeal of Preliminary Flood Insurance Study - Richland/Lexington Counties, South Carolina

Dear Mr. Buckley:

The South Carolina Department of Natural Resources has reviewed FEMA's report titled "Appeal Resolution for the Congaree River in Richland and Lexington Counties, South Carolina" dated September 26, 2000 This report was prepared in response to appeals submitted by this agency and other parties to the revised preliminary Flood Insurance Studies and Flood Insurance Rate Maps issued by FEMA on August 12, 1999. Our interests in this matter are a) to fulfill our responsibilities as designated State Coordinator for the National Flood Insurance Program, b) to insure that the most appropriate scientific and technical information is used in preparing the studies and maps, and c) to protect the archaeologically, historically, and ecologically important Heritage Trust properties on the Lexington County side of the Congaree River which are owned and managed by our agency. We wish to commend you and your staff for an excellent overall job in including the relevant information and conducting the appropriate analyses in preparation of the report. The results of your work and the proposed floodway maps represent a major improvement over those issued on August 12, 1999 Based on our review of your report we hereby submit the following comments and suggestions for your consideration in preparation of the final studies and maps.

- FEMA contends that the 100-year flood flow of the Congaree River is 292,000 cfs The USGS has determined the 100-year flood flow of the Broad River near the confluence with the Saluda River to be about 250,000 cfs, which implies that the Saluda River's contribution to the Congaree River's 100-year flood would be 42,000 cfs. The SCDNR believes that this base flood discharge estimate for the Saluda River, and consequently the Congaree River, is low, and that the regulatory effect of Lake Murray may have been overestimated

- Using Bulletin 17, the 100-year flow for the Saluda River near Columbia (downstream of Lake Murray) for the period 1931-1996 is 56,000 cfs, which is 40 percent higher than the 42,000 cfs used for the period 1892-1996, even though the five largest floods on record for the Congaree occurred between 1892 and 1931.

- The observed data for the 1936 flood (with Lake Murray in place) show a peak flow for the Congaree River of 231,000 cfs, while the Saluda River below Lake Murray peaked at 61,000 cfs. During this flood, which is less than 80 percent of the 100-year flood, the Saluda River's contribution to the Congaree River, with the lake regulation, is more than one and a half times FEMA's estimate of 42,000 cfs.

- Areas where velocities were less than one foot per second were declared to be ineffective flow areas. The SCDNR believes that this one-foot-per-second cutoff is arbitrary and is too high. Therefore, the areas of ineffective flow are overestimated.

- Water surface elevations at the downstream boundary should be 129.2 feet, not 127.2 feet, when running the HEC-2 model.

- Please provide a delineation of the floodway area in Lexington County if the levee remains intact, and an estimate of how many acres in Lexington County will be added to the floodway area in this scenario.

- Please provide the velocity profiles for the Lexington County flood plain during 100-year and 500-year flood events with the levee intact and with levee failure.

- On the Flood Insurance Rate Map for Lexington County, map number 45063C0292 G (Panel 292 of 575), revised 9/26/00, there is a typographical error: In the upper left (northwest) corner of this map, there is a Base Flood Elevation labeled as 141 feet. This line should be labeled as 139 feet, which is how it is labeled on the two adjoining maps and in the FIS report for Lexington County.

Again, we thank you for your excellent work in consideration of our appeal in this matter and for the opportunity to review and comment on your resolution report. Please do not hesitate to contact me at (803) 737-0800 if you have any questions regarding our comments on and suggestions for your report.

Sincerely,

Alfred H. Vang
Deputy Director

AHV:cj
copy: Dr. Paul A. Sandifer
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Johnny W. Jeffcoat, Chairman, Lexington Co. Council
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RETURN SERVICE REQUESTED

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