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**Board of Trustees**  
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**Item #7**  
**General Manager**  
Timothy R. Kerr, P.E.

June 9, 2017

Ms. Leslie Gallagher  
Executive Officer  
Central Valley Flood Protection Board  
3310 El Camino Avenue, Ste LL40  
Sacramento, CA 95821

Dear Ms. Gallagher:

The Board of Trustees of the American River Flood Control District requests that you grant emergency permission to the County of Sacramento, Department of Water for its effort to repair a damaged pipeline penetration in the south levee of the American River. District staff has worked closely with the County of Sacramento to investigate and monitor this grave condition in the District's levee since it was first observed in February 2017. It is urgent for the repair work to be conducted prior to the start of next flood season so that our levee can provide the necessary flood protection to our residents.

It is the intent of the District to work closely with the CVFPB and the County of Sacramento to ensure that this work is conducted in a safe and timely manner that meets all State and Federal standards.

Thank you very much for considering this request. If you have any questions or would like to discuss this further, please contact our General Manager, Tim Kerr, at [tkerr@arfcd.org](mailto:tkerr@arfcd.org), or by phone at 916-929-4006.

Sincerely,

Brian Holloway, President  
American River Flood Control District

June 1, 2017

Ms. Leslie Gallagher  
Executive Officer  
Central Valley Flood Protection Board  
3310 El Camino Avenue, Ste LL40  
Sacramento, CA 95821

**RE: D10 Manlove Storm Drain Pump Station – Emergency permission for work**

Dear Ms. Gallagher:

The County of Sacramento, Department of Water Resources (SacDWR) is requesting emergency permission to repair a pipeline penetration in the south levee of the American River. The D10 Manlove Pump Station (Station) and the American River levee suffered distress from February through March of 2017. The Station is located on the south levee of the American River, approximately 1 mile east of the Watt Avenue crossing and west of Waterton Way (Section 7, T8N, R6E, MDB&M, American River Flood Control District, American River, Sacramento County).

The Station discharge pipes consist of one 54” corrugated metal pipe (CMP) gravity drain and three 42” welded steel pipes (WSP) for pumped discharge. Additionally, there is a CMP riser (Riser) with a slide gate for the 54” CMP and a concrete air relief valve chamber (ARV) for the three 42” WSPs. The Riser and ARV are located at the top of levee on the waterside hinge point.

In February, it was found that when the pumps were operating, soil embankment in the vicinity of the Riser and ARV was being removed and caused a sinkhole in the levee slope, presumably by a leak in one or more of the pipes. The pumps were turned off and soil was brought in to backfill the material that was removed. Approximately 15 cubic yards of material was needed to backfill the material that was lost. Use of the pumps was minimized For the remainder of the wet season.

The exact cause of the distress is unknown. It is suspected that there is an issue with the 2-inch drain line between the ARV and the Riser. This is suspected because degradation of the levee was only observed when the pumps were operating. During pump operation, any excess water from the air relief valves should drain through 2-inch pipe from the ARV to the Riser. It is believed that the 2-inch pipe may be damaged, causing the water from the ARV to enter the levee instead of the drain pipe and carry soil embankment as it enters the Riser. This is the most probable way to account for the loss of the 15 cubic yards of soil embankment material.

Emergency permission is requested to allow SacDWR to excavate the pipes, Riser, and ARV, determine the source of the distress that was encountered during the winter months, determine if the cause of the

distress can be repaired or if some or all parts need to be replaced, and then perform the repair and/or replacement. Various drawings and photographs are enclosed that show the magnitude of the excavation and the probable repair effort. <sup>Item #7</sup>

Emergency permission is necessary due to the urgency of determining and resolving the cause of the distress prior to the next flood season. The loss of 15 cubic yards of material greatly reduced the ability of the levee to with remain stable. It was fortunate that when the distress was first noticed, the American River was only flowing at 60,000 cubic feet per second (cfs). Had it occurred when the river was flowing at 80,000 cfs, there possibly could have been a flood fight required to prevent a levee failure. If the design flow of 115,000 cfs had been released, there most likely would have been a flood fight required to prevent a stability levee failure.

SacDWR will continue the process of formally requesting a Central Valley Flood Protection Board permit. A draft permit application is being prepared, and will continue to be prepared as the investigation and corrective action described in this request for emergency permission is carried out.

The American River Flood Control District (ARFCD) is the Local Maintaining Agency (LMA) of this reach of levee. SacDWR has coordinated with ARFCD on this action. The ARFCD management supports the investigation and repair or replacement of the Station pipelines. The ARFCD Board has received numerous briefings on the developments of this situation and will be briefed on the current proposed course of action during their June board meeting. It is anticipated that following the June meeting the board will express their support for this effort as well.

Your attention to this request is appreciated. If you have any questions, please contact Michael Cook at (916) 874-8546. Thank you for your consideration in this matter.

Sincerely,

County