

5.0 DAM RISK INVENTORY

There have been significant physical and regulatory changes since 2009 that generate changes in dam-related flood risk in the El Paso area. The risk discussed in the 2009 SMP was estimated based upon a series of studies immediately following the August 2006 flooding: post-flood dam inspections (2006), hydrologic adequacy assessments per 2007 Texas Commission on Environmental Quality Dam Safety (TCEQ) guidelines (2008), development of concept designs to achieve TCEQ compliance (2008), and development of Emergency Action Plans (2008). Since 2009, relevant changes include:

- Urbanization. Rapid urbanization upstream of existing dams has increased both flood flows and sediment flows into existing dams.
- Changes to existing dams. Sediment pools have been reduced by sediment inflows. This reduces available flood pool to mitigate floods, and reduces the expected life time of the dam without extensive renovation.
- Changes in TCEQ hydrologic criteria for dams. TCEQ substantially changed the procedure for estimating the state dam design storm (Probable Maximum Precipitation [PMP]) in 2017, a change that included a substantial change in total rainfall depth.
- Changes in dam regulation. The Texas legislature enacted changes to TCEQ dam regulations in 2011 and 2013.

EPWater has responded to these changes by performing a new round of assessments, which are partially complete. Work completed includes:

- Probable Maximum Precipitation Update (FNI, 2018). Assessment of hydrologic adequacy of eight dams.
- Probable Maximum Precipitation Update for Eastwood Dam (FNI, 2018).

At the time of this SMP Update, additional dam assessments are being performed. Per current assessment by EPWater, the following dams are expected to require upgrades to be funded by the SMP Update CIP: Dams 2, 4, and 7 in the Magnolia System; Dams 8, 9, and 10 in the Dallas System; and Eastwood Dam in the East Side Region. These upgrades are included as projects in the SMP Update CIP.