

## EXECUTIVE SUMMARY

The Stormwater Master Plan (SMP) is the product of a process that began with Storm 2006 and included technical evaluations, infrastructure and operational assessments, and a great deal of soul-searching by the community as a whole as it struggled with the impact and future management of such storms. These efforts have led to much-needed improvements in infrastructure, operation and maintenance (O&M), regulation and planning. In many important ways, this document is the results of these efforts.

The main purpose of this SMP is to outline a long-term program to better understand and appropriately improve the drainage infrastructure of El Paso in order to reduce the flood risk to the public and property. More specifically, the SMP was developed to:

- Estimate the stormwater runoff quantities;
- Evaluate major features of the existing stormwater drainage system;
- Identify components of the existing stormwater drainage system that are undersized;
- Identify areas of potential sediment and debris flow;
- Identify risks associated with the existing dams;
- Recommend major stormwater drainage system improvements; and
- Develop a general prioritization of recommended improvements for use in developing a Capital Improvement Program (CIP) based on the available funding from the stormwater fee.

However, this SMP does not stand alone in the goal of reducing potential future flood challenges to the El Paso Community. Major efforts to address flood issues have been made by the City and others in the wake of Storm 2006. This plan builds on the data collection and analytical efforts made previously. The analyses, calculations, and conclusions are only as good as the data upon which they are built so additional effort has been made to enhance that information—and more will need to be done going forward.

This plan builds on the infrastructure improvements made by the City in Storm 2006. Some projects assessed and recommended as part of this effort are directly tied to these earlier, essential efforts.

This plan also works hand-in-glove with the regulatory efforts of the City to limit the adverse stormwater impacts of future development on other property. This plan is focused on key existing issues that already are major problems for the community.

The City's recently adopted Drainage Design Manual (DDM) is the primary vehicle for preventing future problems. The standards and criteria found in the DDM are minimum standards required to prevent new development from negatively impacting the flood risk

of other property owners. According to the DDM, future development of property must include mitigating measures in order to match historic flow (i.e., not increase the runoff onto other properties). This requirement of the DDM needs to be executed in order for this SMP to be successful. Therefore, a recommendation to the City is that El Paso Water Utilities (EPWU) be included in the review of planning and design phases of future developments. This recommended level of coordination will keep EPWU informed of future stormwater infrastructure and provide opportunity for compliance with the SMP and DDM. This coordination is currently being done for water and wastewater infrastructure and should be expanded to include selected stormwater infrastructure.

This study considered all parts of the City for evaluation but then focused its attention on areas where flood risk is particularly high. This process allowed the evaluation and planning efforts to focus on major threats and produced a more cost-effective and useful plan than a broader and more costly effort might have produced. The results of this analysis are 99 recommended major system improvements costing an estimated \$570 million. EPWU staff separately identified another \$80 million in localized drainage issues. That brings the total stormwater needs up to \$650 million.

The purpose of the SMP is to identify deficiencies in the existing system, alternatives for improvements, and the recommended solutions. The CIP is a separate document from the SMP, because the CIP identifies the program of improvements specific to the budget associated with the stormwater fee. EPWU continues to look for additional funding sources for stormwater improvements listed in the SMP. Any other funding sources available in the future should use the SMP for the basis of the program of improvements.

The amount of improvements identified in the plan exceeds the available funding that can reasonably be anticipated for the near future. However, the improvements can be prioritized to get a disproportionate benefit early in the program. In the first three years, \$65 million should be available from the stormwater fee to address needed projects - 10 percent (%) of the identified need. However, based on preliminary prioritization, over 50% of the flood risk identified in the SMP can be addressed or reduced with projects envisioned in the proposed Three-Year CIP. Additional benefits such as improved access to Interstate Highway 10 (IH-10) and major arterials, as well as other health and safety improvements, will also be achieved by these projects. These improvements are enhanced by subsequent projects identified in the plan.

The SMP Community Advisory Committee (CAC), established by EPWU in conjunction with this planning effort, has been an integral part of this process. They have reviewed the proposed Three-Year CIP and will recommend a final prioritization of the projects identified in this plan.

The SMP reflects a reasoned, balanced, and cost-effective approach to addressing the current flood and drainage issues faced by El Paso. It uses standards consistent with those used by other communities in Texas and the Southwest and because of these will

likely be received well by regulators, insurers, infrastructure financier, and other parties. Along with previous efforts made in the wake of Storm 2006, it can form the basis of significant reduction to flood risk, economic, transportation, and health and safety issues in the El Paso community.