

## **Cochise County Flood Control / Urban Runoff Recharge Plan: 1 of 2**

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### **ABSTRACT**

The Cochise County Flood Control / Urban Runoff Recharge Plan was conducted to evaluate the potential flood control and incidental recharge benefits associated with the construction of regional detention facilities along certain ephemeral channels within Cochise County in southeast Arizona. This project was unique in that the plan analyzed the recharge component relative to a sustainable water supply through the collection of stormwater in flood control facilities while offering flood control benefits such as reducing floodplains and the sizing needed for drainage crossings.

Approximately 122 square miles within 12 major watersheds were evaluated through detailed hydrologic modeling for the study. The results of these efforts were the development of peak flow rates for a variety of storm events under specific watershed conditions, i.e. predevelopment, existing and future, with estimated impervious cover within the drainage area representing the distinguishing parameter between the subject watershed conditions.

Detailed reservoir routings for 38 flood control facilities were modeled. Facilities were designed employing the 10-year event as the maximum design storm that could pragmatically be controlled within the Cochise County and Fort Huachuca study areas, while the 100-year event was employed as the target storm within the City of Sierra Vista, consistent with current City regulations. The flood control modeling efforts for the County and Fort studies focused on maintaining future peak flows at levels consistent with estimated predevelopment peak flow rates, while the City study focused on maintaining future runoff volumes at levels consistent with peak flows estimated by the existing condition modeling efforts. The results of the modeling efforts indicate that, given the installation of all facilities evaluated as future potential sites, the targeted flood control objectives can generally be met at various levels within all study areas.