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**VAN NORMAN COMPLEX STORMWATER CAPTURE MASTER PLAN**

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**ABSTRACT:** The City of Los Angeles' water supply has been stressed in recent years due to environmental restrictions and climate fluctuations, but the water demands of Los Angeles' 4 million citizens has not diminished. The City and its water purveyor, Los Angeles Department of Water and Power (LADWP), desire to make more efficient use of its existing resources without generating "new" sources of water. One approach to achieving this is to capture stormwater runoff and put it to beneficial use.

LADWP chose the Van Norman Complex (VNC) watershed to develop a pilot study to estimate the feasibility and effectiveness of capturing and using stormwater runoff to enhance their water supply. The VNC contains the Los Angeles Aqueduct Filtration Plant (LAAFP), the Los Angeles Reservoir, several debris basins, and several detention basins and is located in the northwest corner of the City at the base of the San Gabriel Mountains.

The VNC watershed is about 13 square miles of which 2/3 is mountainous and 1/3 is urban. LADWP retained the Kleinfelder-GeoPentech Team to develop a master plan to capture, convey, and utilize stormwater runoff from the VNC watershed. Working closely with LADWP staff, we developed 15 possible retention alternatives and 35 potential distribution alternatives. A hydrologic model of the existing conditions within the VNC watershed was developed using calibrated input parameters from similar watersheds, and then hydrologic models were developed for possible future conditions. Each individual retention alternative and distribution alternative was evaluated, and based on these results, five retention and five distribution scenarios, or combinations of retention facilities and distribution facilities, were developed and evaluated. A hydrologic model of each scenario was developed to estimate the potential annual stormwater yield, which was used in the evaluation process. Finally, conceptual drawings of the scenarios were created and the Stormwater Master Plan was written summarizing the results of the study. The City has many facilities, and the results of this project will be used to guide future development of these facilities to capture and use stormwater throughout Los Angeles, maximizing the efficiency of their existing water resources.

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