Current Status of the Water Distribution System

The existing Water Distribution System consists of asbestos cement (AC) pipe that has been in service since the early 1970s (50 years). Since 2000, the City has repaired approximately 15 waterline breaks per year at an estimated cost of $30,000/year. A water balance analysis was completed in 2007 indicating an average water loss from the existing system of 2 million gallons per month.

In March of 2010, Harlingen Water Works System added Reduced-Pressure Principle Backflow Prevention Assemblies at the 2 water delivery points which lowered the available system pressure.

In September 2010, the Texas Commission on Environmental Quality (TCEQ) -Harlingen Regional office conducted an investigation regarding a complaint of low water pressure. The City of Palm valley responded with a Compliance Plan which included the installation of a Booster Pump Station at the southeast water delivery point, with plans to construct a 150,000-gallon Elevated Storage Tank (EST) in the near future. The EST was not constructed, and the City continues to struggle with maintaining acceptable water system pressures at the northwest quadrant of town. The water pressure leaving the booster pump station is currently limited to approximately 40 psi to avoid an increase in waterline breaks and water losses.

City is requesting Loan Assistance to fund $11,512,323 of the Bond Issue for the Water Distribution System Improvement projects to address the low water pressure and water loss issues.

Project Description

Funding will be specifically used to completely replace the Water Distribution System and construct an Elevated Storage Tank. Construction is anticipated to be completed in three (3) phases which will be determined after the bond issue election.

The drainage improvements will be as follows:

- Phase 1 will include construction in the Southwest portion of the City. The project will include the installation of 9,200 LF of 8” RJ PVC waterline and 1,955 LF of 10” RJ PVC via pipe bursting (a trenchless method), a 2” temporary water supply to residents during pipe bursting and the replacement of water service lines and fire hydrants.

- Phase 2 will include construction in the Southeast portion of the City. The project will include the installation of 9,600 LF of 8” RJ PVC waterline, a 150,000 gallon Elevated Storage Tank with meter and Backflow Preventer, a 2” temporary water supply to residents during pipe bursting and the replacement of water service lines and fire hydrants.

- Phase 3 will include construction in the North portion of the City. The project will include the installation of 9,705 LF of 8” RJ PVC waterline, a 2” temporary water supply to residents during pipe bursting and the replacement of water service lines and fire hydrants.