5.1 City of Sweetwater

A significant portion of the City of Sweetwater has been historically affected by severe flooding. The City expressed its need to provide flood protection to the residents whose public health, safety and welfare is threatened.

The City developed a drainage study to determine the precise cause and severity of the flooding, and provide an engineered solution for immediate relief. The study determined several contributing factors, which in the aggregate produce severe flooding. The most significant cause stems from the fact that SW 114th Avenue abuts the Tamiami Canal via SW 7th Terrace. This is one of the first streets constructed in the City of Sweetwater, built well before the implementation of flood criteria regulations in Miami-Dade County.

Water levels in the Tamiami Canal can severely impact the City of Sweetwater. Generally the canal elevations are at about elevation 4.0 feet. Catch basins along 114th Avenue are at elevation 5.5 feet. Therefore, the capacity of the existing exfiltration systems is directly impacted by the canal elevations.

Major changes in canal operations made by the South Florida Water Management District since 1988, have also contributed to the City's flooding problems. These changes have resulted in higher groundwater levels within City. Since the City's existing drainage infrastructure is entirely dependent on groundwater levels, this has had a major negative impact on the City's ability to provide adequate storm drainage and flood control.

In 1994, 1995, and 1997, the City and surrounding areas experienced floods, one so severe that hundreds of homes were damaged by floodwaters. The recent hurricane flooded the entire city for several days.

There is urgent need for either operational changes by South Florida Water Management District to their complex water management system or the construction of major flood control infrastructure improvements by the city, or some combination of these two. To remedy the

situation, the City proposes to install a system of pumps and emergency generators to convey stormwater to the nearby Snapper Creek Canal, but only during significant flood events.

The emergency storm water pump station system proposed for the City of Sweetwater would consist of seven (7) submersible pump stations located throughout the City. The pump stations would not be interconnected to the existing French drain systems, but would be piped separately and operate only when the French drains fail. The system would discharge to the Snapper Creek canal via a 36” outfall. In addition, there would be two (2) generators in separate buildings to supply power during power outages.

Further information on the City of Sweetwater may be found in Appendix K.

Please refer to the maps at the beginning of Chapter 5 to view the City’s relative location in Miami-Dade County.