City of Pembroke Pines

2021 Legislative Appropriations Requests

The following is a narrative of four (4) projects being requested thru the 2021 Legislative Session.

1. City of Pembroke Pines License Plate Reader (LPR) Project

The Pembroke Pines Police Department recognized the value of License Plate Reader technology early on and our department has successfully utilized LPR technology to enhance public safety over time. The current use of mobile LPR systems has been greatly beneficial in proactive police work, investigations, and missing person recovery. Deployment strategies are frequently utilized to suppress crime and to gain investigative leads. A fixed LPR system will improve upon our mobile LPRs as it allows for a continuous deployment strategy without the need to recharge mobile systems. A fixed system also provides greater coverage with a reduction on staffing needs for deployment and recovery of assets.

The inclusion of the fixed LPR system at areas of ingress/egress to the city allow for real-time alerting of known wanted vehicles. This includes stolen vehicles, vehicle involved in felonies, vehicles thought to be carrying missing persons such as those with Alzheimer's or dementia, etc. The return benefits on the use of this technology has already proven to be very high in terms of recovering property, safely locating endangered people, and reducing/solving crimes.

A fixed LPR feasibility study was completed in 2018 along with city engineers and our current LPR vendor. As a result, several intersections were identified citywide where current infrastructure may facilitate the installation of fixed LPRs. Additionally, the intersections were selected due to their value at capturing data relevant to volume, and investigative leads. The intersections were then separated into three phases with phase 1 comprised of the highest priority and largest arteries along our jurisdictional boundaries. The intersections included in phase 1 are as follows:

Pines Blvd & NW 68 Ave (W/B)	Flamingo Rd & Sheridan St (S/B)
S University Dr. & Pembroke Rd (N/B)	Flamingo Rd & Pembroke Rd (N/B)
Pembroke Rd & SW 72 Ave (N/B)	Dykes Rd & Sheridan St (S/B)
Douglas Rd & Pembroke Rd (N/B)	Dykes Rd & Pembroke Rd (N/B)
Palm Ave & Pembroke Rd (N/B)	NW 172 Ave & Sheridan St (S/B)
N University Dr. & Sheridan St (S/B)	SW 172 Ave & Pembroke Rd (N/B)
Douglas Rd & Sheridan St (S/B)	SW 184 Ave & Pembroke Rd (N/B)
Palm Ave & Sheridan St (S/B)	NW 196 Ave & Sheridan St (S/B)
Hiatus Rd & Sheridan St (S/B)	SW 145 Ave & Pembroke Rd (N/B)
Hiatus Rd & Pembroke Rd (N/B)	SW 178 Ave & Pembroke Rd (N/B)

For the purposes of this grant, only about one-third to one-half of these intersections would be grant funded. A quote was obtained from our current LPR vendor for the phase 1 project in the amount of $1,061,016.93 in which the City will contribute 62% ($661,016.93) through a local match. The City asks the State to appropriate $400,000 towards this project.

2. Seepage Management Stormwater Pump Station

Seepage management is a critical component of any large, regional water management system here in South Florida. The western communities of Pembroke Pines are adversely impacted by seepage that migrates from the Florida Everglades Conservation Area 3A, and raises both groundwater and surface water elevations. This is year-round phenomenon, but is especially impactful during Hurricane Season when these higher water elevations reduce stormwater storage in lakes, and make it much harder for the City to protect these communities from flooding during major rainfall events.

The South Florida Water Management District (SFWMD) has recognized the impacts of seepage in the western C-11 Basin and manage this seepage through seepage management structures (S381) and the S-9A pump station. According to SFWMD, there is an approximate 6-foot difference in water levels across the East Coast Protective Levy that separates Conservation Area 3A from the urban areas to the east.

The proposed project is for the installation of an internal, stormwater pump station in the western limits of the City of Pembroke Pines to re-channel seepage from Conservation Area 3A back into the Everglades, through the SFWMD S-9A pump station.

The stormwater pump station would be located on the east side of US 27 in western Pembroke Pines (see maps below). The pump station would pump seepage that migrates into the surface waters on the east side of US 27 back into the US 27 Canal (L-33 Canal), then north through the SFWMD S-9A pump station, located at US 27 and Griffin Road.

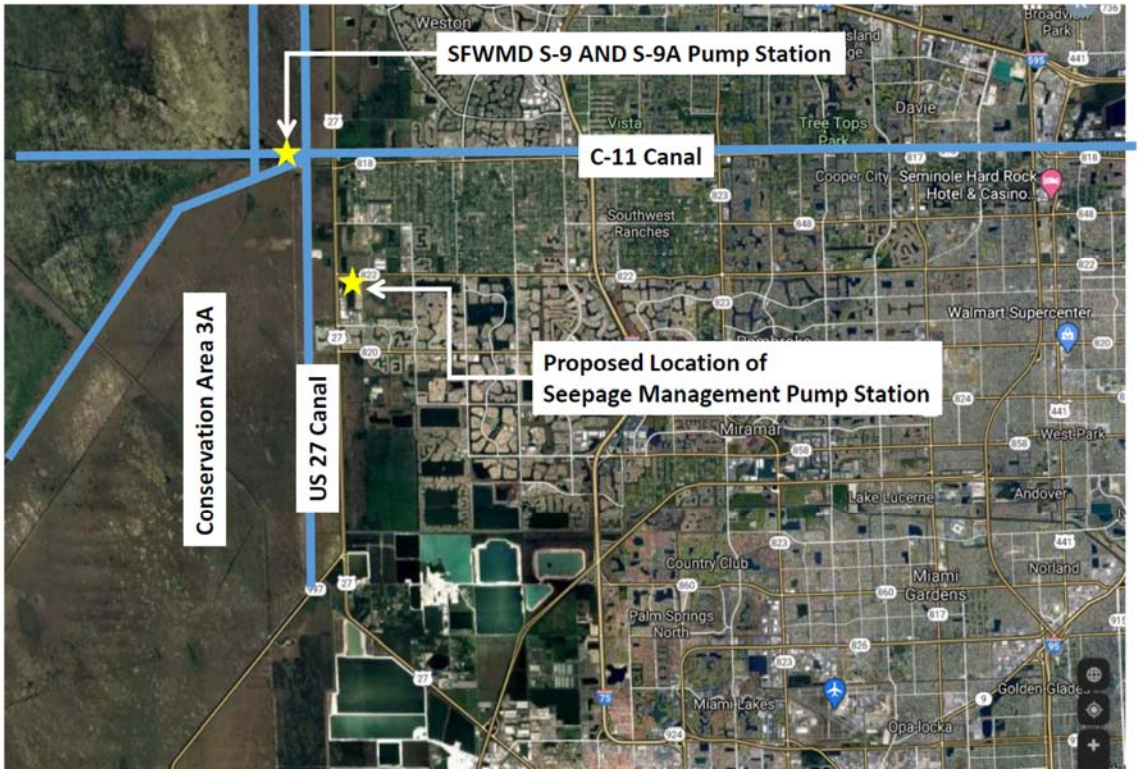
The pump station would be sized to manage and discharge only the rate of seepage that currently impacts the water bodies in this area. The water levels in this area will be strictly maintained at the permitted Control Water Elevations (CWE) – not lower. Due to the impacts from seepage, it is not possible to maintain these surface waters at the CWE though gravity discharge alone. The pump station will be owned and operated by the South Broward Drainage District (SBDD).

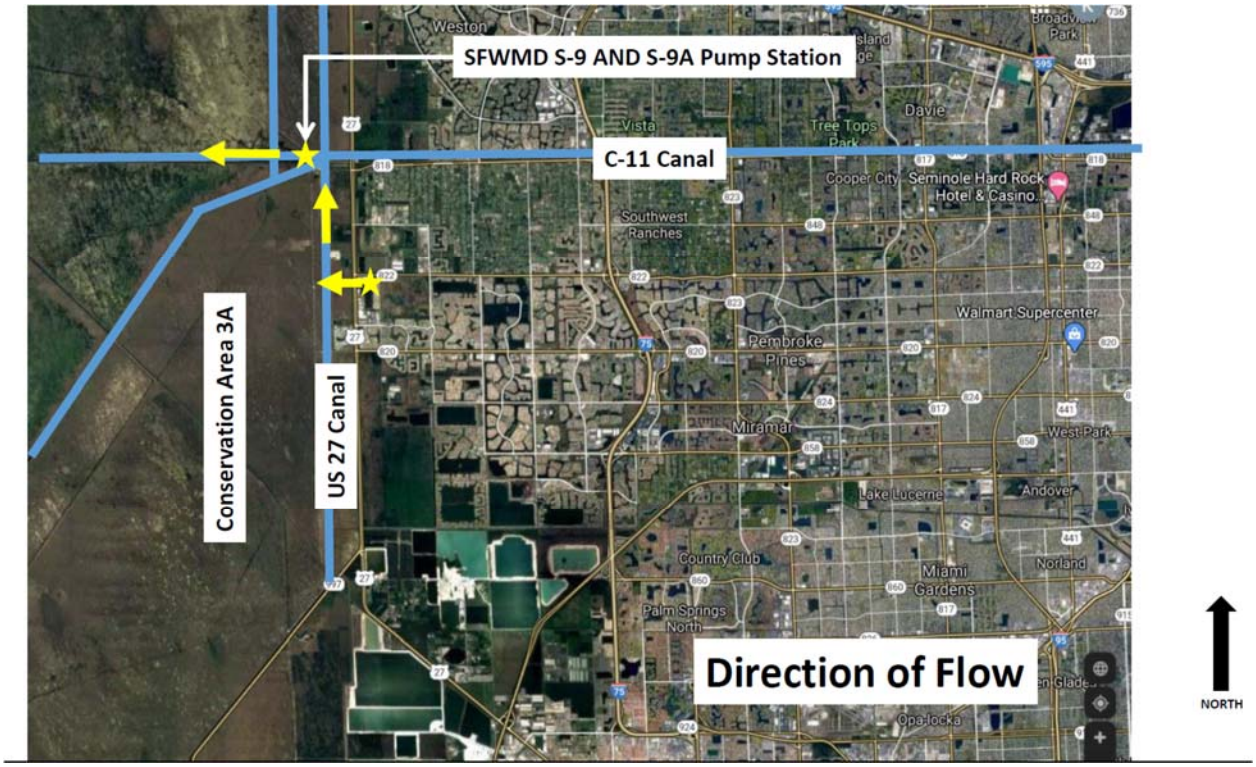
The project will provide the following benefits:

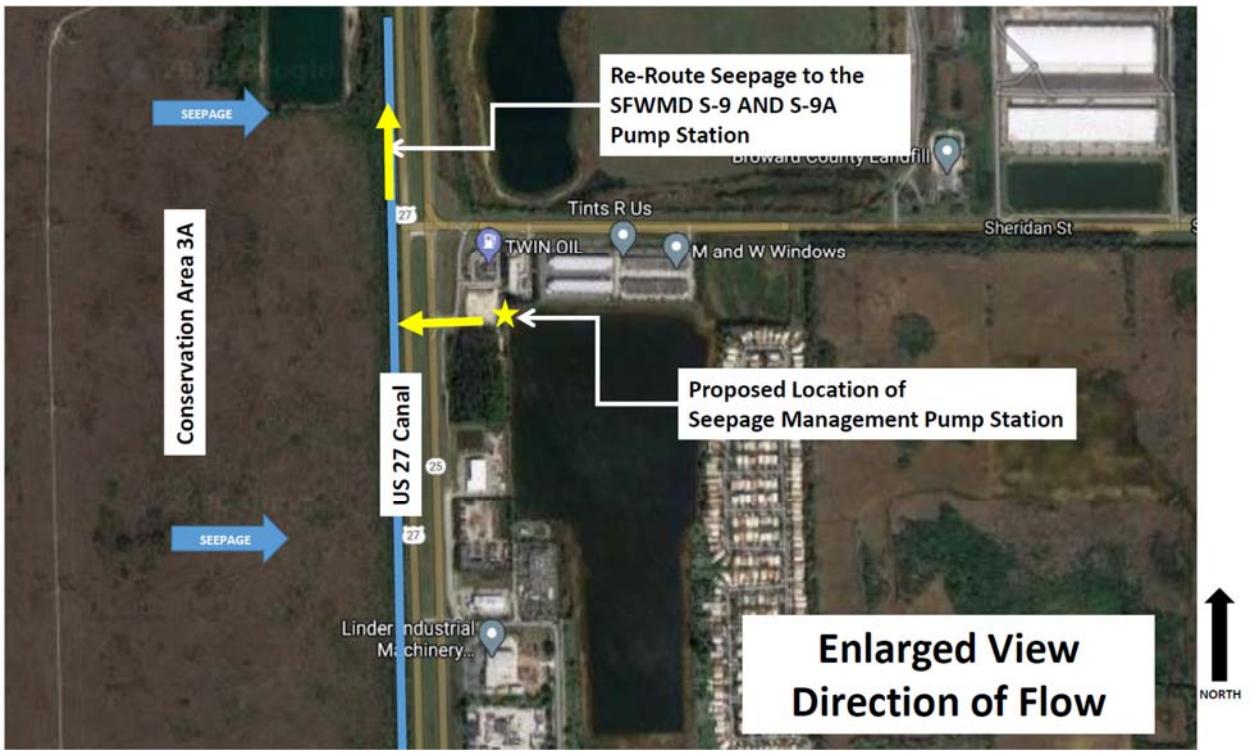
- Allow the City and SBDD to maintain surface water levels at the permitted CWE, year-round.
- Provide additional storage for flood protection during the Hurricane Season, which is critical in protecting properties from flood damages.
- Allow the City and SBDD the ability to lower water levels in advance of major rain events (with approval of SFWMD and the State), and create additional storage.
- Allow the City and SBDD the ability to lower water levels after a major storm event and off-set the impacts of seepage during this critical time period.
- Allow the City and SBDD to better manage and maintain groundwater elevations at the permitted CWE and off-set the impacts of seepage.
- Water quality will continue to be provided within the internal water management systems.

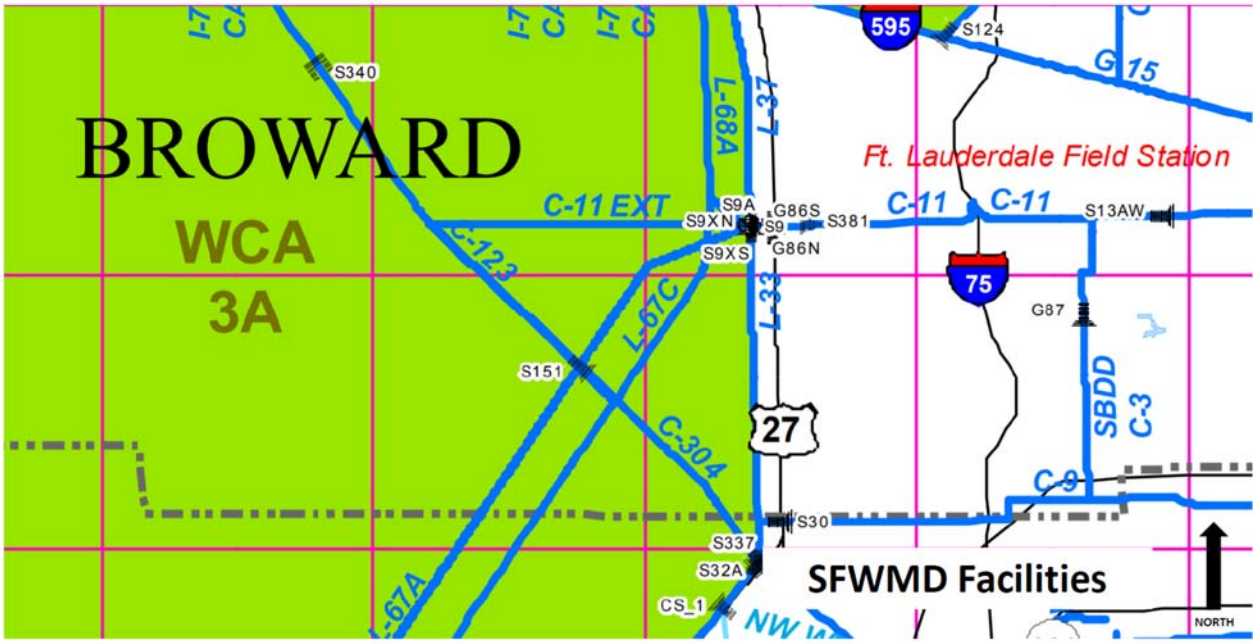
The estimated amount needed for this project is $1,250,000, in which the City will contribute 68% ($850,000) through a local match. After discussions with Kevin Hart, SBDD District Director, it is the intent of the SBDD to fund 50% (or $425,000) of the City's Match. The City asks the State to appropriate $400,000 for this project.


Proposed Location of
Seepage Management Pump Station
SEEPAGE
SEEPAGE
Conservation Area 3A
Weston
Pine Island Ridge
Davie
Southwest Ranches
Walmart Supercenter
Pembroke Pines
Miramar
West Park
Lake Lucerne
Andover
Country Club
Miami Gardens
Norland
Palm Springs North
Miami Lakes
Opa-locka
Golden Glade
NORTH


SFWMD S-9 AND S-9A Pump Station
C-11 Canal
Proposed Location of
Seepage Management Pump Station
Conservation Area 3A
US 27 Canal
Weston
Vista
Tree Tops Park
Davie
Cooper City
Seminole Hard Rock Hotel & Casino
Southwest Ranches
Walmart Supercenter
Miramar
West Park
Lake Lucerne
Andover
Country Club
Miami Gardens
Norland
Palm Springs North
Miami Lakes
Opa-locka
Golden Glade
NORTH


SFWMD S-9 AND S-9A Pump Station
C-11 Canal
Conservation Area 3A
US 27 Canal
Direction of Flow
NORTH
Weston
Davie
Vista
Tree Tops Park
Cooper City
Seminole Hard Rock Hotel & Casino
Southwest Ranches
Walmart Supercenter
Pembroke Pines
Miramar
West Park
Lake Lucerne
Andover
Country Club
Miami Gardens
Norland
Palm Springs North
Opa-locka


Re-Route Seepage to the SFWMD S-9 AND S-9A Pump Station
SEEPAGE
Conservation Area 3A
US 27 Canal
Tints R Us
TWIN OIL
M and W Windows
Sheridan St
Proposed Location of Seepage Management Pump Station
SEEPAGE
Enlarged View Direction of Flow
NORTH


BROWARD
WCA
3A
S340
L-68A
L-37
595
S124
G 15
Ft. Lauderdale Field Station
C-11 EXT
S9A
S9XN
S9
G86S
S381
C-11
C-11
S13AW
S9XS
G86N
75
G87
L-123
L-67C
L-33
S151
27
SBDD
C-3
C-304
C-9
S30
S337
S32A
CS_1
SFWMD Facilities
NORTH

3. Sanitary Sewer Vacuum Tanker Truck Purchase(s) for Emergency Sewage Removal

The City currently owns and operates three vactor trucks which are utilized for various utility work including sewage removal. During sewer emergencies, these trucks remove sewage from neighborhoods and dispose of the sewage to the sewage treatment plant. Due to the multi-use nature of these vactor trucks, they can move a limited amount of sewage (about 3000 gallons) per trip. The purchase of two Sewer Vacuum Tanker Trucks will provide dedicated equipment for the express purpose of sewage removal while increasing the amount of sewage per truck to about 7000 gallons per trip. The benefit of this purchase is to increase efficiency of sewage removal and reduce the time of inconvenience to the residents. The Sewer Vacuum Tanker Trucks will be used throughout the City and will be available for loan to other agencies with sewer emergencies. The estimated purchase cost of a Sewer Vacuum Tanker Truck is $175,000. The amount needed to purchase two vacuum tanker trucks is $350,000, in which the City will contribute 50% ($175,000) through a local match. The City asks the State to appropriate $175,000 for this purchase.

4. Sanitary Sewer Inflow Reduction of Western Pembroke Pines by Chimney Seal Method

During extreme rain events and subsequent street flooding, the sanitary sewer system experiences rainwater inflow through manholes. This rainwater inflow overwhelms the sewer system and results in excessive pumping, electricity costs and possible back-up of sewage to individual homes. Efforts to reduce rainwater inflow to manholes include the application of special water-proofing materials to the upper portion of the manhole, referred to as the "chimney". The manhole chimney is constructed from brick and mortar and is subject to leakage over time. Sealing the manhole chimney reduces the inflow of rainwater into the sanitary sewer system through the chimney and thereby reduces the removal and pumping of sewage and the possible inconvenience to residents. In the areas most hard hit by Tropical Storm Eta (North of Pines Boulevard and West of Northwest 182nd Avenue), there are approximately 1700 manholes which could benefit from reductions in rainwater inflow including possible chimney sealing. These areas should be smoke tested in advance to verify which manhole chimneys are leaking for the most efficient application of funds. The estimated amount needed for this project is $766,835.64, in which the City will contribute 50% ($383,417.82) through a local match. The City asks the State to appropriate $383,417.82 for this project.