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## Temporary Pumps

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## Commission Workshop on Resilience

January 27, 2020

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**OBJECTIVES PROTECT AND ENHANCE OUR ENVIRONMENT AND INVEST IN INFRASTRUCTURE PROJECTS AND ASSETS THAT BUILD RESILIENCE BENEFITS LIKE REDUCING FLOOD RISK AND INCREASING SUSTAINABILITY.**

A photograph of a modern building with a curved glass facade and palm trees in the foreground. A large sign in the center reads "Welcome to SUNSET HARBOUR".

## COMMISSION GOALS

- Clean water strategy (2020)
- Improved infrastructure (2050)
- Stormwater, water, and sewer planning (2020)





An aerial photograph of a street intersection where the road surface is flooded with water. Orange and white water barriers are placed along the edges of the road to contain the water. Two cars are visible on the road. To the left of the road is a grassy area with four circular stormwater manholes. To the right is a sidewalk and a grassy area with a street lamp. The scene illustrates the city's stormwater management efforts.

The City has a robust Stormwater Plan to address “sunny day” flooding...

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Indian Creek and 32<sup>nd</sup> Street



# While the plan is implemented...

- During **emergency conditions** the City deploys **temporary pumps** and **personnel with vacuum trucks** to mitigate flooding



Indian Creek and 34<sup>th</sup> Street



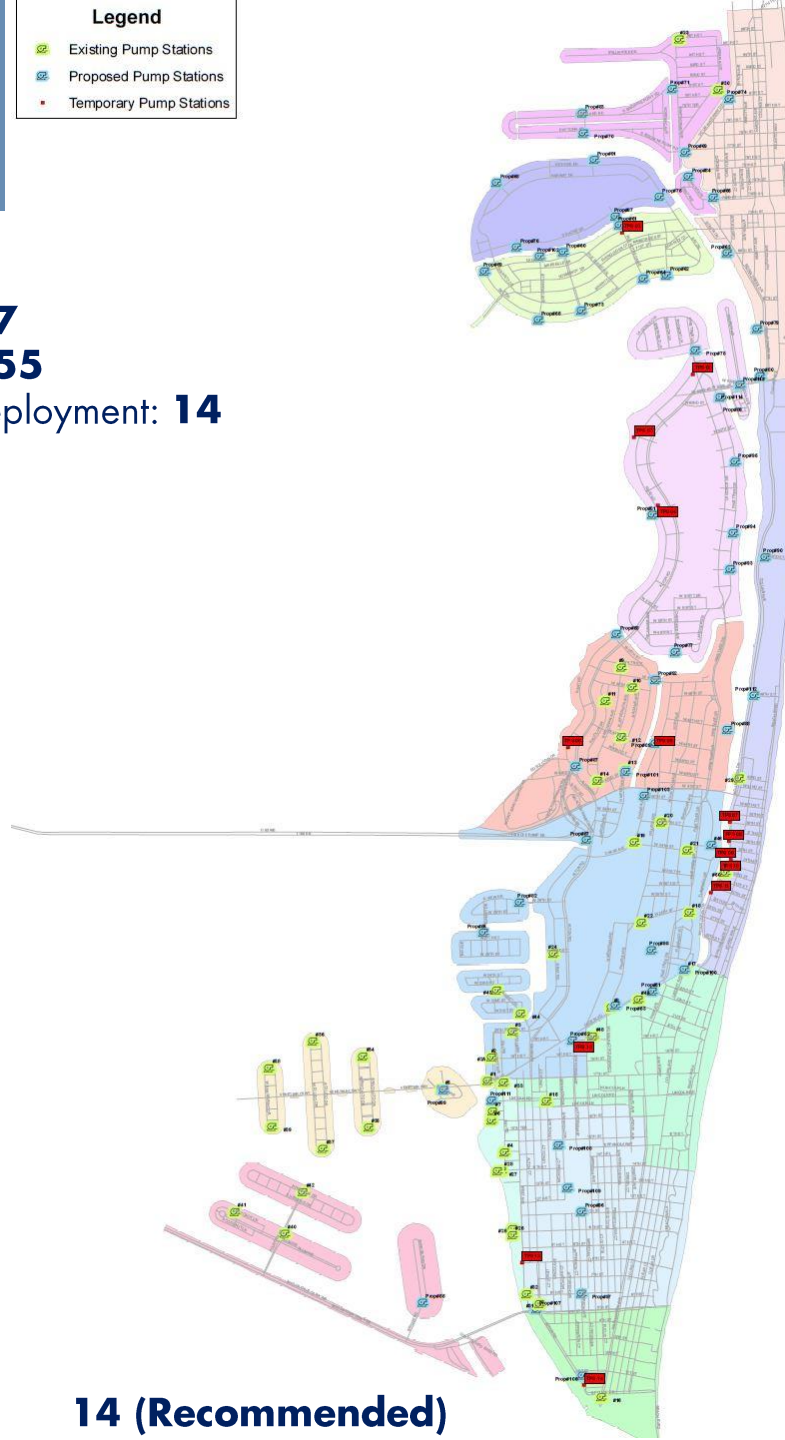
West Ave and 8<sup>th</sup> Street



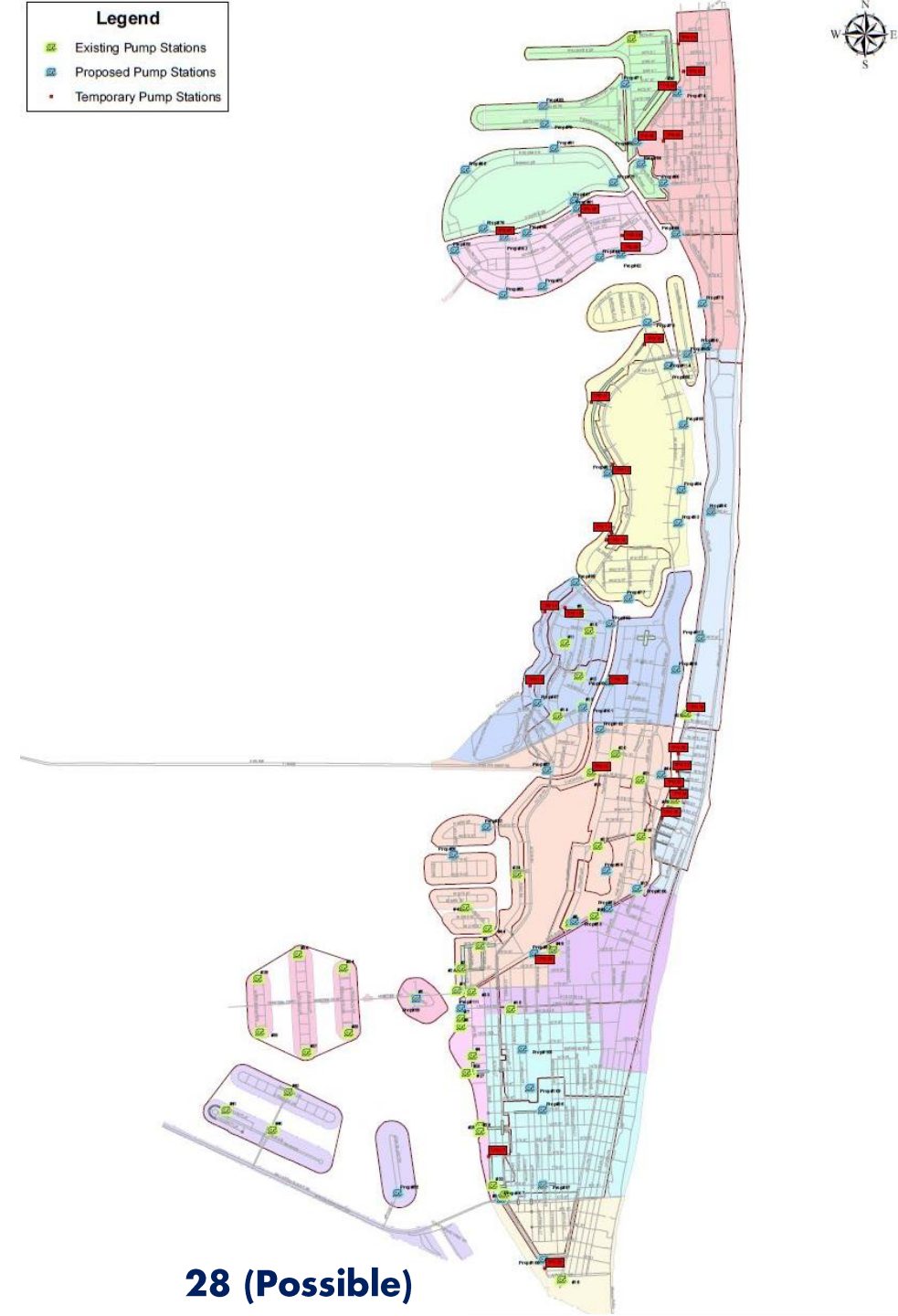


# This effort needs to continue...

Existing Permanent Active Pump Stations: **47**  
Proposed Future Permanent Pump Stations: **55**  
Proposed locations for temporary pumps deployment: **14**  
**Recommended/ 28 Possible**



**14 (Recommended)**

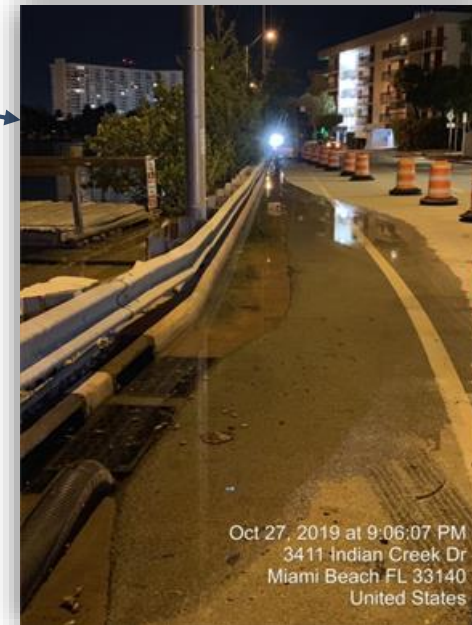


**28 (Possible)**

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**Legend**

- Existing Pump Stations
- Proposed Pump Stations
- Temporary Pump Stations



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# Temporary Pumps Deployment - 2020

## Cost of Temporary Deployment 2017-2020

	Duration	No. of Pumps	Equipment	Fuel	Personnel	Total
<b>FY 16/17</b>	5-months	13 to 28	\$ 152,742.38	\$ 139,574.40	\$ 100,800.00	<b>\$ 393,116.78</b>
<b>FY 17/18</b>	11-months	27	\$ 325,410.73	\$ 307,063.68	\$ 221,760.00	<b>\$ 854,234.41</b>
<b>FY 18/19</b>	4-months	10 to 14	\$ 65,026.57	\$ 51,842.96	\$ 53,760.00	<b>\$ 170,629.53</b>
<b>FY 19/20</b>	3-months	14	\$ 147,701.10	\$ 38,882.22	\$ 40,320.00	<b>\$ 226,903.32</b>

## Estimated Cost of 2020 Deployment:

### 14-Pump deployment for 6 months:

Deployment Duration: **6-months**

No. of Pumps: **14**

Equipment Cost: **\$295,420.20**

Fuel Cost: **\$77,764.44**

Personnel: **\$80,640.00**

Total estimated cost for 6 months: **\$453,824.64**

### 28-Pump deployment for 6 months:

Deployment Duration: **6-months**

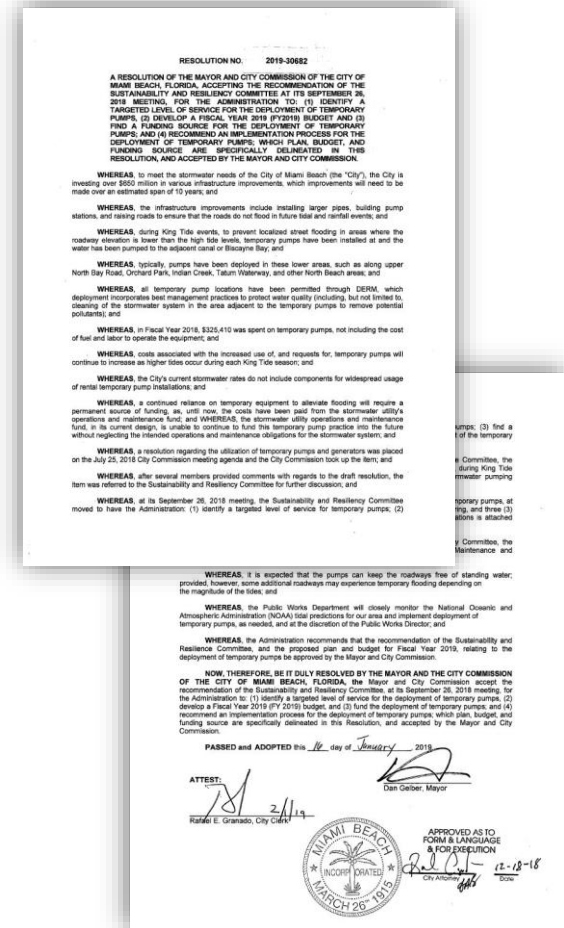
No. of Pumps: **28**

Equipment Cost: **\$601,670.40**

Fuel Cost: **\$167,486.28**

Personnel: **\$120,960.00**

Total estimated cost for 6 months: **\$890,119.68**



Resolution No. 2019-30682

An aerial photograph of a road construction site. A blue car is driving on a two-lane road. Three orange traffic cones are placed along the road. In the background, several cars are parked on the side of the road. The road is bordered by a concrete wall on the left and a grassy area on the right. The water is visible in the bottom left corner.

**Q and A**

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Indian Creek and 27<sup>th</sup> Street