



Florida's Warmest Welcome

**City of Pompano Beach
UTILITIES ADMINISTRATION**

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MEMORANDUM NO. 19-45

DATE: September 19, 2019
TO: Greg Harrison, City Manager
Via: Brian Donovan, Assistant City Manager
FROM: A. Randolph Brown, Utilities Director
SUBJECT: Water Resource Planning and Investment in the C-51 Reservoir

Our current Consumptive Use Permit (CUP) allows the City to withdraw a maximum of 17.7 million gallons per day (MGD). This year, we are averaging 15.4 MGD. Recently, we have had requests to supply water to new developments within the City.

- Casino Live 1.5 MGD – 0.54 MGD over past allocation
- Downtown Pompano Transit Oriented Corridor - 2.35 MGD - 0.58 MGD over past allocation
- Pompano Citi Centre - 0.2 MGD
- Numerous other developments between 0.75 -0.50 MGD

Water Source Alternatives

Reuse

We have been depending on our reuse program to make up the drinking water needed for future growth. Expanding the reuse system is a great water resource for the City; however, with new developments, we cannot build our reuse system fast enough to prepare for this coming demand. The annual funding is \$300,000. This reaches an average of 100-150 homes. To produce 2 MGD from reuse offsets (potable water savings from using reuse), it will take about 3,000 homes and 20 years at current funding to save that much drinking water for the growth.

We need to make reuse *mandatory* now for the most efficient use of this resource. We have 434 homes not connected to reuse in the City. If they connected, this would save between 100,000 and 200,000 gallons of drinking water a day.

Floridan Aquifer Water

An estimate of \$16 million dollars is the current rate to construct new treatment facilities to treat 2 MGD water from the Floridan Aquifer in conjunction with an annual O&M cost of \$1.02 million.

C-51 Reservoir

Water from the C-51/System can be treated with the current treatment plants that we have today. To buy into the reservoir the construction costs for one million gallons is \$4.6 million dollars with annual operations and maintenance costs of \$36,551 per MGD. The City has an opportunity to buy into the reservoir from Palm Beach Aggregates. The City Commission has passed two resolutions (2011 & 2014) supporting this regional project.

We have a “One Water” concept using wells, reuse and stormwater, that makes up our current integrated water supply approach. Water from the C-51 would add diversification to our sustainable water supply, one that would not be affected by sea level rise, which is a threat to our eastern wells.

Our current CUP permit with South Florida Water Management (SFWMD) expires in 2025. In 2023, we will begin working on the renewal permit. The C-51 is considered an Alternative Water Supply (AWS) and can be permitted for 40 years vs. 20 years for a normal CUP.

We can do more work on conservation to lower our per capita use that will extend our drinking water supplies. However, there will be a point of diminishing returns where we have saved as much as we can. Conservation is an ongoing program in our Utilities Department.

Recommendation

A. Approve an ordinance making reuse mandatory in FY 2020

B. To ensure an adequate and sustainable water supply, I recommend that the City purchase 2 MGD (\$9.2 M) from the C-51 reservoir project. This would diversify the City’s approach to future water supply and support Strategic Plan Goal 4 for Superior Capacity for Growth through Sustainability of the City’s water resources. We would need to bring forward a letter requesting to purchase the water for Commission approval in October of this year. Payment would not begin until the completion of the reservoir first quarter of 2022.

C. Proceed to work with the SFWMD to adjust our CUP to include water from the C-51.