

MEMORANDUM

TO: Governing Board Members

FROM: Chip Merriam, Deputy Executive Director, Water Resources

DATE: July 25, 2007

SUBJECT: Approve the renewal and modification of Water Use Permit Application 060207-8 for the City of North Miami Beach for a 20-year permit duration (Miami-Dade County)

SUMMARY

Staff recommends the approval of renewal and modification of Water Use Permit 13-00060-W (Application Number 060207-8) for the City of North Miami Beach to serve a projected population of 218,148 in the year 2027 and to increase the annual allocation to 14,644 million gallons per year (40.12 million gallons per day average). Sources are the Biscayne and Floridan Aquifers.

BACKGROUND

Under its current Consumptive Use permit issued in 2001, North Miami Beach is authorized to withdraw an average of up to 26.3 million gallons per day from the Biscayne Aquifer. However, actual withdrawals from the Biscayne Aquifer have been limited to approximately 15 million gallons per day due to treatment capacity. The city purchases approximately 10 million gallons per day from Miami-Dade County to meet their current demands while an additional nanofiltration treatment plant was under construction. The current Consumptive Use Permit also allocates withdrawals of up to 6.67 million gallons per day from the Floridan Aquifer, although no withdrawals have occurred from this source. Under the proposed permit, the City is requesting to renew its Biscayne Aquifer allocation, and increase its Floridan Aquifer allocation to 13.81 million gallons per day. Upon start-up of the new nanofiltration and reverse-osmosis treatment plants, the city will discontinue the bulk water purchase agreement with Miami-Dade County. Treatment losses for the nanofiltration and reverse osmosis processes have been factored into the raw water allocations listed above to produce a finished water amount of 31.41 million gallons per day in 2027. Recommended permit duration is 20 years.

REGIONAL WATER AVAILABILITY

The base condition water use is the amount of water permitted and used as of April 1, 2006. The regional water availability rule also provides that if a quantity of water was allocated under a permit existing on April 1, 2006 to supply a demand for water to be treated in a water treatment plant which was under construction but was not completed by April 1, 2006, the base condition water use will be calculated as if the plant were in operation before that date. The 2001 consumptive use permit issued to North Miami Beach allocates an average-annual withdrawal rate of 26.3 million gallons per day (MGD) from the Biscayne Aquifer. This allocation was authorized to allow the City to fund the construction a new nanofiltration water treatment facility and become self-sufficient in meeting the demands of its Service Area upon completion of this treatment plant. The new treatment plant was designed to treat approximately 11 MGD of raw water in order to produce approximately 9 MGD of finished water, in addition to the 15 MGD they were already pumping and treating at their existing lime-softening plant. The City has demonstrated their service area demands would be approximately 26 MGD prior to April 1, 2006, had the new nanofiltration plant been in operation prior to that date. Therefore, North Miami Beach has demonstrated their base condition water use is approximately 26 MGD. Consistent with these actions, the contract for bulk

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purchase between North Miami Beach and Miami-Dade County was amended in 2001 to provide that North Miami Beach discontinue purchasing water from Miami-Dade upon completion of the new nanofiltration treatment facility. The new plant is scheduled to be operational by the end of this year, at which time North Miami Beach will discontinue the bulk purchase and become fully self-supplied. In addition, North Miami Beach is utilizing the Floridan Aquifer, an Alternative Water Supply source, to meet all additional demands over its base condition withdrawals. Therefore, there will be no net increase in the volume or change in the timing on a monthly basis of surface and groundwater withdrawn from the Lower East Coast Everglades Waterbodies, and staff concludes that the Regional Water Availability rule has been met.

**Staff Contact: Keith Smith, Deputy Director, Water Supply Department
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