

MEMORANDUM

TO: Governing Board Members

FROM: Chip Merriam, Deputy Executive Director, Water Resources

DATE: April 14, 2009

SUBJECT: Approve Water Use Permit Modification and Renewal Application 081107-9 for public water supply for the projected water use demands with a 20-year duration for Deerfield Beach (Broward County)

SUMMARY

Staff recommends approval of the modification and renewal of Water Use Permit 06-00082-W for the Deerfield Beach public water supply system to withdraw the projected maximum allocation of 493 million gallons per month (MGM) and 5,924 million gallons per year (MGY), which equates to an average of 16.23 million gallons per day (MGD) with a 20-year duration. The modification includes an increase of the annual allocation of the current permit from 4,528 MGY to a projected allocation of 5,924 MGY to serve approximately 70,743 persons in 2028. For the average annual allocation, 11.91 MGD of raw water will be derived from the Biscayne aquifer and 4.32 MGD from the upper Floridan aquifer.

BACKGROUND

There are two existing wellfields; East and West. The East wellfield has been in existence since 1950 and the West wellfield was installed in the late 1970's. The East wellfield has 15 Biscayne aquifer wells which are further divided into seven secondary wells, seven standby wells and one inactive well (due to contamination issues). Withdrawals from the East wellfield are limited to 102 MGM (3.35 MGD) due to the potential for saltwater intrusion. The West wellfield consists of four existing and two proposed Biscayne aquifer wells and one existing and one proposed upper Floridan aquifer wells. There are two interconnected water treatment plants (WTP), East and West. The East WTP treats with lime softening and the West WTP has both lime softening and nanofiltration membrane facilities. A low pressure reverse osmosis treatment facility at the West WTP is scheduled to be completed in October 2009. The applicant is proposing to utilize the upper Floridan aquifer as an alternative water source to meet the projected increase in allocation with no increase in allocation from the Biscayne aquifer wellfields. The applicant also purchases 0.6 MGD of raw water from Broward County.

MFL RECOVERY AND CERP ISSUES

The increase in allocation is proposed from the upper Floridan aquifer, a confined aquifer system with no MFL or CERP issues associated with it. The withdrawals from the Biscayne aquifer are limited to the historic "base condition water use".

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