

# Memorandum



**Date:** October 7, 2008

**To:** Honorable Chairman Bruno A. Barreiro and Members,  
Board of County Commissioners

**From:** George M. Burgess  
County Manager

**Subject:** Report on the Feasibility of Providing Water to the City of North Miami on a Wholesale Basis

|                                  |
|----------------------------------|
| <b>Agenda Item No.</b><br>12(B)4 |
|----------------------------------|

On June 3, 2008, the Board of County Commissioners adopted Resolution No. R-676-08 which directs staff to investigate the feasibility of providing water on a wholesale basis to the City of North Miami. In response, the Miami-Dade Water and Sewer Department (WASD) carried out a study with input from the City and South Florida Water Management District (District). Part of the study included conversations with the City regarding service terms and rates charged to City customers and to residents of the Unincorporated Municipal Service Area (UMSA) served by the City. Another part of the study included looking into the willingness of the District to minimize economic impacts to the City by allowing the County to utilize its plant capacity to provide water to the City.

According to the City, it currently serves a total of 79,000 customers (approximately 62,000 within City limits and the remaining 17,000 in UMSA). It produces up to 9 million gallons per day (MGD) of drinking water at its Winson Park Water Treatment Plant which draws its water from the Biscayne Aquifer and approximately 5 MGD purchased from WASD.

The City has applied for a permit from the District to continue to withdraw and to treat about 8.7 MGD from the Biscayne Aquifer and to withdraw an additional 11.6 MGD from the Floridan Aquifer. Under the City's proposed future plan, they would stop purchasing water from the County in 2013. However, if the City decides to provide service to its entire service area by purchasing wholesale water exclusively from the County through 2025, WASD would have to increase its water sales to the City from 5 MGD to 17 MGD.

WASD has the treatment capacity at its existing water plants to deliver these additional quantities of water to the City. After conferring with District staff, it was determined that if WASD delivers more water to the City, the County would require a modification to its 20-Year Water Use Permit to include the City's future water service demands which WASD can supply. This can be done through the City's existing wholesale water purchase agreement with the County. Currently, there are water consumption reductions due to decreased demand (in WASD's service area) because of on-going conservation efforts including irrigation restrictions. These reductions could be used as a source of additional supply to meet the City's future water supply requirements. Although discussions with City staff confirm its intention to seek a permit from the District to develop its own water supply facilities rather than purchasing a portion or all of its water from the County.

A comparative analysis (Exhibit A) illustrates the current cost of water to City customers and to WASD's retail customers using the monthly average of 6,750 gallons per month. The analysis confirms that the City's customers are paying more than WASD's retail customers based on City and WASD rate schedules as of October 1, 2007. At current rates, City residents are paying a total of \$26.12 per month for 6,750 gallons of water. This includes the City's direct charge for water plus a monthly \$14 Capital Improvement Fee (CIF) that will generate capital funds to provide approximately \$25 million of improvements to their existing water treatment plant and about \$102 million to construct a new

treatment plant to replace the City's wholesale purchases from WASD. For residential customers served by the City that live outside the municipal boundaries and consume an average of 6,750 gallons of water, the charges total \$29.14; this also includes the \$14 monthly CIF and the 25 percent surcharge on municipal rates. The City reports this surcharge is not being applied to the CIF that is permitted by state law for municipal utilities providing service to persons outside of their municipal boundaries. In comparison, WASD's retail customers pay \$11.39 for 6,750 gallons of water per month, inclusive of all water production, distribution and debt service costs.

Exhibit B shows the City's commercial customers (in all rate categories) which pay substantially more than their WASD counterparts, including the monthly CIF of \$75.28 charged to all City commercial customers. The cost differences between City and WASD charges for 25,000 gallons of water in each of the commercial rate categories range from \$49.81 per month to \$1221.52 more per month for the City. For commercial customers served by the City but outside of the City boundaries, the cost differences compared with WASD rates range from \$63.90 to \$1,593.43 more per month.

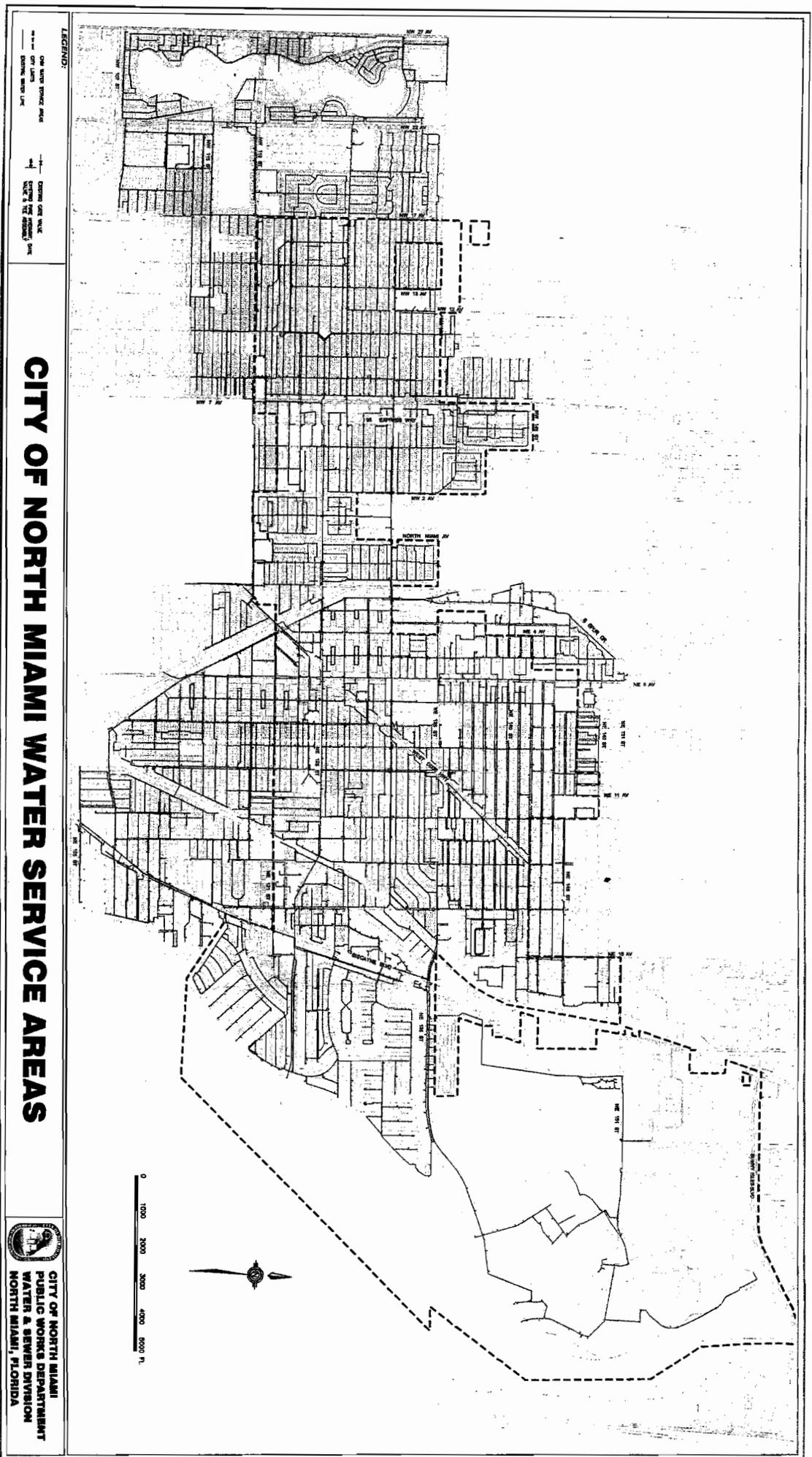
At the May 13, 2008 Government Operations and Environmental Committee meeting, City Mayor Kevin Burns indicated that the City intends to have a rate study completed that would include equalizing rates among all customers, regardless of whether they are City residents or not. While it is difficult to forecast all of the factors that may influence the cost of water over a period of 20 years, it is probable that the ratio of less expensive Biscayne Aquifer water to more expensive water from alternative sources will be highly influential in determining future costs for all utilities in South Florida. The City's proposed plan for 2025 would involve a ratio of 52 percent Biscayne water with 48 percent Floridan Aquifer water requiring expensive treatment. The County's approved 20-Year Water Use Permit contemplates 80 percent Biscayne water and 20 percent alternative water supply water to meet future demands to 2027. It is therefore likely that the cost of water to WASD customers will continue to be less than the cost of water provided under the City's proposed plan.

In conclusion, WASD has the existing treatment capacity to meet the City's current and future water demands. City customers are currently paying considerably more than WASD customers for an equivalent amount of water, inclusive of the City's CIF. If the City constructs and operates its own Floridan Aquifer treatment plant and stops purchasing water at wholesale rates from the County, the disparity between what City customers pay for water and what WASD retail customers pay may increase.

The statutes and rules governing the permitting decisions of the District do not currently include consideration of economies of scale or the cost of water to individual utility customers. There is no provision in the present regulatory system to require the formation or use of larger wholesale water providers similar to WASD, which has developed over time as the result of an explicit County policy in the 1970's for a countywide water and sewer system that provides reliable and efficient services to County residents.

Attachments: Map of City Service Area  
Exhibit A - Cost Comparison of Residential Charges  
Exhibit B - Cost Comparison of Commercial Charges

C: Honorable Carlos Alvarez, Mayor  
Denis Morales, Mayor's Chief of Staff  
Susanne M. Torriente, Assistant County Manager  
John W. Renfrow, P.E. Director, Miami-Dade Water and Sewer Department



**LEGEND:**

--- CITY BOUNDARY LINE  
 --- CITY LIMITS  
 --- EXISTING WATER LINE

--- EXISTING WATER LINE  
 --- EXISTING WATER LINE  
 --- EXISTING WATER LINE

**CITY OF NORTH MIAMI WATER SERVICE AREAS**

**CITY OF NORTH MIAMI  
 PUBLIC WORKS DEPARTMENT  
 WATER & SEWER DIVISION  
 NORTH MIAMI, FLORIDA**



**Exhibit A - North Miami - Average 6,750 Gallon Residential Customer**

| Customer                 | Description  | Rate Comparison                   |                            |                           |                       | Difference          |                      |
|--------------------------|--|-----------------------------------|----------------------------|---------------------------|-----------------------|---------------------|----------------------|
|                          |  | North Miami Residential Customers | Outside City 25% Surcharge | Total Outside City Limits | 6,750 Gal Retail WASD | Inside City Per/Mth | Outside City Per/Mth |
|                          |  | North Miami                       | Inside City                | 10,111                    |                       |                     |                      |
|                          | Outside City   | 7,219                             |                            |                           |                       |                     |                      |
| <b>Water</b>             |  |                                   |                            |                           |                       |                     |                      |
| <b>Meter Size - 5/8"</b> |  |                                   |                            |                           |                       |                     |                      |
|                          | <b>Base Charge ( &lt;= 5,000 gal )</b>                   | \$10.33                           | \$2.58                     | \$12.91                   | \$3.20                |                     |                      |
|                          | <b>Usage ( &gt; 5,000 gal )</b><br>( 1.75 times \$1.02 ) | \$1.79                            | \$0.45                     | \$2.23                    | \$8.19                |                     |                      |
|                          | <b>CIF - Water</b>                                       | \$14.00                           | \$0.00                     | \$14.00                   | \$0.00                |                     |                      |
|                          | <b>Total Water</b>                                       | <b>\$26.12</b>                    | <b>\$3.03</b>              | <b>\$29.14</b>            | <b>\$11.39</b>        | <b>\$14.72</b>      | <b>\$17.75</b>       |

**Note: 1) Capital Improvement Fee (CIF)**  
**2) Based on FY 07-08 Adopted Rates**

Prepared by: Miami-Dade Water & Sewer Department

**Exhibit B - North Miami - 25,000 Gallon Non-Residential (Commercial) Customer**

| Customer    | Description                               | Rate Comparison                        |                                  |                                 |                              | Difference             |                         |
|-------------|---|--|----------------------------------|---------------------------------|------------------------------|------------------------|-------------------------|
|             |   | North Miami<br>Commercial<br>Customers | Outside<br>City 26%<br>Surcharge | Total<br>Outside City<br>Limits | 25,000 Gal<br>Retail<br>WASD | Inside City<br>Per/Mth | Outside City<br>Per/Mth |
| North Miami | Inside City                               | 1,939                                  |                                  |                                 |                              |                        |                         |
|             | Outside City                              | 685                                    |                                  |                                 |                              |                        |                         |
|             | <b>Water</b>                              |  |                                  |                                 |                              |                        |                         |
|             | <b>Meter Size - 1"</b>                    |  |                                  |                                 |                              |                        |                         |
|             | Base Charge ( < = 5,000 gal )             | \$19.98                                | \$5.00                           | \$24.98                         | \$8.61                       |                        |                         |
|             | Usage ( > 5,000 gal ) ( 20 times \$1.82 ) | \$36.40                                | \$9.10                           | \$45.50                         | \$73.24                      |                        |                         |
|             | CIF - Water                               | \$75.28                                | \$0.00                           | \$75.28                         | \$0.00                       |                        |                         |
|             | <b>Total Water</b>                        | <b>\$131.66</b>                        | <b>\$14.10</b>                   | <b>\$145.76</b>                 | <b>\$81.85</b>               | <b>\$49.81</b>         | <b>\$63.90</b>          |
|             | <b>Meter Size - 1.5"</b>                  |  |                                  |                                 |                              |                        |                         |
|             | Base Charge ( < = 5,000 gal )             | \$48.99                                | \$12.25                          | \$61.24                         | \$13.43                      |                        |                         |
|             | Usage ( > 5,000 gal ) ( 20 times \$1.82 ) | \$36.40                                | \$9.10                           | \$45.50                         | \$73.24                      |                        |                         |
|             | CIF - Water                               | \$75.28                                | \$0.00                           | \$75.28                         | \$0.00                       |                        |                         |
|             | <b>Total Water</b>                        | <b>\$160.67</b>                        | <b>\$21.35</b>                   | <b>\$182.02</b>                 | <b>\$86.67</b>               | <b>\$74.00</b>         | <b>\$95.35</b>          |
|             | <b>Meter Size - 2"</b>                    |  |                                  |                                 |                              |                        |                         |
|             | Base Charge ( < = 5,000 gal )             | \$121.56                               | \$30.39                          | \$151.95                        | \$28.73                      |                        |                         |
|             | Usage ( > 5,000 gal ) ( 20 times \$1.82 ) | \$36.40                                | \$9.10                           | \$45.50                         | \$73.24                      |                        |                         |
|             | CIF - Water                               | \$75.28                                | \$0.00                           | \$75.28                         | \$0.00                       |                        |                         |
|             | <b>Total Water</b>                        | <b>\$233.24</b>                        | <b>\$39.49</b>                   | <b>\$272.73</b>                 | <b>\$101.97</b>              | <b>\$131.27</b>        | <b>\$170.76</b>         |
|             | <b>Meter Size - 3"</b>                    |  |                                  |                                 |                              |                        |                         |
|             | Base Charge ( < = 5,000 gal )             | \$218.23                               | \$54.56                          | \$272.79                        | \$61.32                      |                        |                         |
|             | Usage ( > 5,000 gal ) ( 20 times \$1.82 ) | \$36.40                                | \$9.10                           | \$45.50                         | \$73.24                      |                        |                         |
|             | CIF - Water                               | \$75.28                                | \$0.00                           | \$75.28                         | \$0.00                       |                        |                         |
|             | <b>Total Water</b>                        | <b>\$329.91</b>                        | <b>\$63.66</b>                   | <b>\$393.57</b>                 | <b>\$134.56</b>              | <b>\$195.35</b>        | <b>\$259.01</b>         |
|             | <b>Meter Size - 4"</b>                    |  |                                  |                                 |                              |                        |                         |
|             | Base Charge ( < = 5,000 gal )             | \$435.79                               | \$108.95                         | \$544.74                        | \$95.77                      |                        |                         |
|             | Usage ( > 5,000 gal ) ( 20 times \$1.82 ) | \$36.40                                | \$9.10                           | \$45.50                         | \$73.24                      |                        |                         |
|             | CIF - Water                               | \$75.28                                | \$0.00                           | \$75.28                         | \$0.00                       |                        |                         |
|             | <b>Total Water</b>                        | <b>\$547.47</b>                        | <b>\$118.05</b>                  | <b>\$665.52</b>                 | <b>\$169.01</b>              | <b>\$378.46</b>        | <b>\$496.51</b>         |
|             | <b>Meter Size - 6"</b>                    |  |                                  |                                 |                              |                        |                         |
|             | Base Charge ( < = 5,000 gal )             | \$822.68                               | \$205.67                         | \$1,028.35                      | \$153.23                     |                        |                         |
|             | Usage ( > 5,000 gal ) ( 20 times \$1.82 ) | \$36.40                                | \$9.10                           | \$45.50                         | \$73.24                      |                        |                         |
|             | CIF - Water                               | \$75.28                                | \$0.00                           | \$75.28                         | \$0.00                       |                        |                         |
|             | <b>Total Water</b>                        | <b>\$934.36</b>                        | <b>\$214.77</b>                  | <b>\$1,149.13</b>               | <b>\$226.47</b>              | <b>\$707.89</b>        | <b>\$922.66</b>         |
|             | <b>Meter Size - 8"</b>                    |  |                                  |                                 |                              |                        |                         |
|             | Base Charge ( < = 5,000 gal )             | \$1,451.24                             | \$362.81                         | \$1,814.05                      | \$268.16                     |                        |                         |
|             | Usage ( > 5,000 gal ) ( 20 times \$1.82 ) | \$36.40                                | \$9.10                           | \$45.50                         | \$73.24                      |                        |                         |
|             | CIF - Water                               | \$75.28                                | \$0.00                           | \$75.28                         | \$0.00                       |                        |                         |
|             | <b>Total Water</b>                        | <b>\$1,562.92</b>                      | <b>\$371.91</b>                  | <b>\$1,934.83</b>               | <b>\$341.40</b>              | <b>\$1,221.52</b>      | <b>\$1,593.43</b>       |
|             | <b>Meter Size - 10"</b>                   |  |                                  |                                 |                              |                        |                         |
|             | Base Charge ( < = 5,000 gal )             | \$1,451.24                             | \$362.81                         | \$1,814.05                      | \$574.63                     |                        |                         |
|             | Usage ( > 5,000 gal ) ( 20 times \$1.82 ) | \$36.40                                | \$9.10                           | \$45.50                         | \$73.24                      |                        |                         |
|             | CIF - Water                               | \$75.28                                | \$0.00                           | \$75.28                         | \$0.00                       |                        |                         |
|             | <b>Total Water</b>                        | <b>\$1,562.92</b>                      | <b>\$371.91</b>                  | <b>\$1,934.83</b>               | <b>\$647.87</b>              | <b>\$915.05</b>        | <b>\$1,286.96</b>       |

Note: 1) Capital Improvement Fee (CIF)  
2) Based on FY 07-08 Adopted Rates

Prepared by: Miami-Dade Water & Sewer Department