17. WATER SUPPLY

A. 1. Provide a projection of the average daily potable and non-potable water demands at the end of each phase of development. If significant seasonal demand variations will occur, discuss anticipated peaks and duration. Use the format below:

Estimated average daily potable water and non-potable water demands for the Beacon Countyline development are provided in **Table 17.A.1 (R) – Average Daily Potable Water Demand**. Potable water demand estimates are calculated as an average daily demand based on full year-round occupancy. Seasonal variations are not expected to be significant.

Table 17.A.1 (R)
Average Daily Potable Water Demand

Proposed Development			Potable Water Demand		
Use	**Amount**	**Units**	**Rate* (Gallons Per Day, GPD)**		**Demand**
Warehouse	4,300,000	Sq. Ft.	0.02	GPD/Sq. Ft.	86,000
Office	750,000	Sq. Ft.	0.10	GPD/Sq. Ft.	75,000
Retail	320,000	Sq. Ft.	0.05	GPD/Sq. Ft.	16,000
Restaurant - Fast Food	338	Seat	35.00	GPD/Seats	11,830
Restaurant - Full Service	300	Seat	50.00	GPD/Seats	15,000
Hotel	350	Rooms	100.00	GPD/Room	35,000
Total Gallons Per Day Demand					238,830

Source: PBS&J

* Potable water demand rates are the equivalent of sewer flow rates set forth in Sec. 24-13(5) of the Code of Metropolitan Dade County for the County's use in determining sewage flows. See ADA Section 17A for a discussion on methods and assumptions used to derive rates for the proposed general use categories from categories provided in the Code.

Landscape irrigation will account for most of the development's non-potable water demand, which will vary seasonally. Greatest demand will occur during periods of high plant growth and low rainfall, generally during the late spring and early summer months. The estimate in **Table 17.A.2 (R) – Average Daily Non-Potable Water Demand for Irrigation (High Period)** is based on irrigation in this high demand period.

Table 17.A.2 (R) Average Non-Potable Water Demand for Irrigation (High Period)			
Proposed Development		**Irrigation Water Demand***	
Use	**Acres**	**Acres Requiring Irrigation**	**Gallons Per Day**
Warehouse	270	0.10 of Total	104,731
Office	58	0.10 of Total	22,498
Retail and Restaurants	51	0.10 of Total	19,782
Hotel	8	0.20 of Total	6,206
Total Gallons Per Day Demand			153,217
			Source: PBS&J

* Estimates are for application of one inch weekly to areas requiring irrigation, representing usage in a warm period with low rainfall. The estimates assume that 10% of warehouse, office and retail tracts, and 20% of the hotel site, will require irrigation.

2. Describe how this demand information was generated, including the identification of the consumption rates assumed in the analysis.

Consistent with the practice and custom of the Miami-Dade County Water and Sewer Department, potable water and wastewater flow demand estimates are based on their 'Schedule of Daily Rated Gallonage for Various Occupancy'. The estimate assumes that all potable water used enters the wastewater system. Rates for the land use categories from pursuant to Section 24-43 of the Miami-Dade County Code were applied to the proposed uses as follows:

Warehouse – 20 gallons per day per 1,000 square feet (20 gpd per 1,000 sq. ft.) for Warehouse Industrial uses

Office – 10 gpd per 100 sq. ft. for Office uses

Retail – As requested by the Miami-Dade Department of Environmental Resource Management (DERM), Table 17.1 has been revised to provide an estimate of restaurant potable water demand as a separate component of the proposed 350,000 square feet of retail use. The revised estimate was produced as follows:

- Assumed ten fast food restaurants occupying a total of 15,000 square feet and containing 338 seats total based on typical characteristics of fast food restaurants, and applied the 35 gpd per seat rate to these seats.

- Assumed three full-service restaurants occupying a total of 15,000 square feet and containing 300 seats total based on typical characteristics of full-service restaurants, and applied the 50 gpd per seat rate to these seats.

- Applied the 5 gpd per 100 sq. ft. rate for the "Shopping Center (dry uses)" category to the remaining 320,000 square feet of retail space not assumed to be restaurants as explained above.

Hotel –100 gpd per room for Hotel/Motel uses

Non-potable water demand estimates assign one inch weekly to areas requiring irrigation, representing usage in a warm period with low rainfall. The estimates assume that 10 percent of warehouse, office and retail tracts, and 20 percent of the hotel site, will require irrigation.

The Applicant proposes to offer a site in the south and/or the southwest corner of the Property to the City of Hialeah for development of public park/recreation and/or other public facilities. Since potable and non-potable water demands attributable to this area can vary significantly according to the types of uses the City elects to develop on the Site, no estimate of those demands is provided.

B. Provide a breakdown of sources of water supply, both potable and non-potable, by development phase through project completion. Use the format below.

The Property is in the City of Hialeah and will be served by the City's municipal water distribution system. The Applicant will pursue a service agreement with the City which will set forth terms for providing potable water service for the proposed development. The service agreement may also address extension of reclaimed water service to the Site at such time as it becomes feasible and practicable.

The City of Hialeah has committed to building a Floridian Aquifer- sourced Reverse Osmosis (RO) water plant to increase the City's long-term capacity. It is understood that the facility will be located within or adjacent to the Beacon Countyline Property. The Applicant and the City have been working together with the goal of having the proposed RO plant operational by 2011. In the interim, the Applicant expects to utilize available capacity until the City's RO water plant is operational.

Shallow wells or the storm water ponds will be used for irrigation purposes until such time as the City will be able to provide reclaimed water to the Property.

C. If water wells exist on-site, locate them on Map H and specify those that will continue to be used. Also locate on Map H all proposed on-site wells. (For residential developments, if individual wells for each lot are proposed, simply indicate the number of units to be served, general locations, and any plans for eventual phase-out.) Indicate the diameter, depth, and pumping rates (average and maximum) for each of the existing wells and project this information for the proposed wells (for lots served by individual dual wells, this information may be grouped for projection purposes). Also provide a breakdown of the wells with regard to potable and non-potable sources.

There are no existing potable water or irrigation wells on the Site. As noted above, shallow, low volume wells or the storm water ponds would be used as a source of irrigation water.

In addition to the RO plant, the City intends to locate a Floridian Aquifer wellfield in and around the Property to supply the RO plant. The locations of the wells have not been determined but will be defined during the SFWMD permitting process by the City.

D. If on-site water wells are used, will this result in interference with other water wells or result in adverse impacts to underlying or overlying aquifers? Document the assumptions underlying this response.

The proposed development will have minimal irrigation needs. Any On-Site wells that may be needed would have a minimal effect on other wells in the vicinity or groundwater resources.

E. Who will operate and maintain the internal water supply system after completion of the development?

The proposed service agreement referenced above will set terms for ownership and maintenance of facilities. However, it is anticipated that the potable water distribution system will be located in public rights-of-way or in easements that would be dedicated to the City's utility department. The system would be dedicated to the City who will own and maintain the system as part of the municipal water supply system.

F. 1. If an off-site water supply is planned, attach a letter from the agency or firm providing service outlining:

(a) the projected excess capacities of the water supply facilities to which connection will be made at present and for each phase through completion of the project,

(b) any other commitments that have been made for this excess capacity,

(c) a statement of the agency or firm's ability to provide services at all times during and after development. (This agency must be supplied with the water demand and supply tables in paragraphs A and B above).

The Applicant has attached **Exhibit 17-1 (R) – Letters of Available Service** requesting an indication of the ability and capacity of the City of Hialeah to provide water services to the Project and a response to the above information. The response will be forwarded when received.

2. If service cannot be provided at all times during and after development, identify the required capital improvements, timing, cost, and proposed responsible entity for each phase in which service is unavailable.

The development schedule will be contingent on availability of sufficient treatment and distribution capacity to meet the needs of the Development. The Applicant will pursue an agreement with the City providing assurance that adequate capacity will be available to serve the Project throughout the development period.

G. Please describe any water conservation methods or devices incorporated into the plan of development. What percentage of reduction is anticipated over conventional plans?

Water conservation measures and devices will be incorporated into the development plan as required by the City of Hialeah development regulations and, the Florida Building Code. For example, plumbing fixtures (e.g. toilets, urinals, shower heads,

and sink faucets) that enable reduced water usage will be incorporated into new facilities as required by the City plumbing code under the Florida Water Conservation Act. In addition, during periods of severe water shortage, the Project will adhere to the requirements of Chapter 40E-21 of the Florida Administrative Code. The Project's landscaping will adhere to xeriscape principles, which encourage the use of moisture and rain sensor switches for irrigation and sets design standards for irrigation systems to prevent the overthrow or overflow of water on to impervious surfaces. In addition, Beacon Countyline shall where feasible and practicable:

(a) Install anti-backsiphoning valves between well and water pipes;
(b) Maintain a naturally vegetated buffer next to streams, lakes, ponds and wetlands;
(c) Use silt fencing or biofiltration (permeable bags filled with chips, compost or bales of straw) to control erosion during construction;
(d) Designate appropriate location for washing vehicles and equipment – away from surface waters, storm drains and slopes that could erode, at carwash or at builders' shop with a sump during construction;
(e) Immediately repair all equipment and vehicle leaks during construction;
(f) Consider air assisted or compost toilets during design; and,
(g) Consider water efficient appliances and equipment.

H. Indicate whether proposed water service will be provided within an established service area boundary.

The Property is in the City of Hialeah and the City's service area boundary.

Exhibit 17-1 (R)

Letters of Available Service

PBS&J

An employee-owned company

April 11, 2008

Mr. Armando Vidal
City of Hialeah
Department of Water and Sewer
501 Palm Avenue
Hialeah, FL 33010

SUBJECT: Beacon Countyline DRI – Water and Wastewater Treatment Services

Dear Mr. Vidal:

The Flagler Development Group proposes to develop a business park on approximately 496 acres in the western part of the City of Hialeah (see enclosed Location Map). The proposed development, called Beacon Countyline, is a development of regional impact (DRI) pursuant to Section 380.06, Florida Statutes, and my firm is assisting in preparing submittals for the DRI review process. This request is based on the premise that both Hialeah and WASD have available interim capacity to serve this project and WASD is in the process of increasing the existing 2.0 MGD to Hialeah in order to provide for the subject project.

Questions 17 and 18 of the DRI Application for Development Approval (ADA) address potential impacts on potable water and wastewater facilities, respectively. These Questions require the DRI applicant to request a letter from the potable water and wastewater service providers addressing the following information:

- the projected excess capacities of the water supply and wastewater treatment facilities to which connection will be made at present and through completion of the project,
- any other commitments that have been made for this excess capacity and
- a statement from the agency or firm's ability to provide services at all times during and after development.

Enclosed is Attachment 'A' that contains Tables 17.1, 17.2 and 18.1 showing the estimates of potable water, non-potable irrigation water and wastewater treatment demands by type of use in the proposed development. Please note that these tables have been revised since the ADA was originally filed in order to correctly describe the current development proposal and also to respond to review agency comments and requests. Also please note that irrigation water will be provided from a non-potable source and would not affect potable water demand.

It is anticipated that, initially, water supply to the project would rely on the existing capacity that WASD allocates to the City subject to a small increase to the new wholesale agreement. In the future, supply would be supplemented by the proposed water treatment plant to be located next to the project site.

The applicant has begun the process of closing the landfill now on the property and anticipates commencement of development about two years after receiving DRI approval. I would appreciate your written reply to the information requirements above so that we forward it to review agencies as soon as possible. Please call Jose Gonzalez of the Flagler Development Group (305-520-2372), or me (305-514-3419) if you have any questions about this request.

Thank you for you assistance in this matter.

Sincerely,

Michael A. Lee
Senior Project Manager

001179703
C: / Hialeah Utility Letter.doc
Enclosures
Cc: J. Gonzalez, FDG
R. Curtis, The Curtis Group

PBS&J

Attachment 'A'

Section 17, Water Supply

TABLE 17.1 Average Daily Potable Water Demand					
Proposed Development			**Potable Water Demand**		
Use	**Amount**	**Units**	**Rate* (Gallons Per Day, GPD)**		**Demand**
Warehouse	4,300,000	Sq. Ft.	0.02	GPD/Sq. Ft.	86,000
Office	750,000	Sq. Ft.	0.10	GPD/Sq. Ft.	75,000
Retail	320,000	Sq. Ft.	0.05	GPD/Sq. Ft.	16,000
Restaurant – Fast Food	338	Seat	35	GPD/Seats	11,830
Restaurant – Full Service	300	Seat	50	GPD/Seats	15,000
Hotel	350	Rooms	100	GPD/Room	35,000
Total Gallons Per Day Demand					238,830
Source: PBS&J					

* Potable water demand rates are the equivalent of sewer flow rates set forth in Metropolitan Dade County Water and Sewer Department's 'Schedule of Daily Rated Gallonage for Various Occupancy'. See ADA Section 17A for a discussion on methods and assumptions used to derive rates for the proposed general use categories from categories provided in the Code.

TABLE 17.2 Average Non-Potable Water Demand for Irrigation (High Period)			
Proposed Development		**Irrigation Water Demand***	
Use	**Acres**	**Acres Requiring Irrigation**	**Gallons Per Day**
Warehouse	270	10% of Total	104,731
Office	58	10% of Total	22,498
Retail and Restaurants	51	10% of Total	19,782
Hotel	8	20% of Total	6,206
Total Gallons Per Day Demand			153,217
Source: PBS&J			

* Estimates are for application of one inch weekly to areas requiring irrigation, representing usage in a warm period with low rainfall. The estimates assume that 10% of warehouse, office and retail tracts, and 20% of the hotel site, will require irrigation.

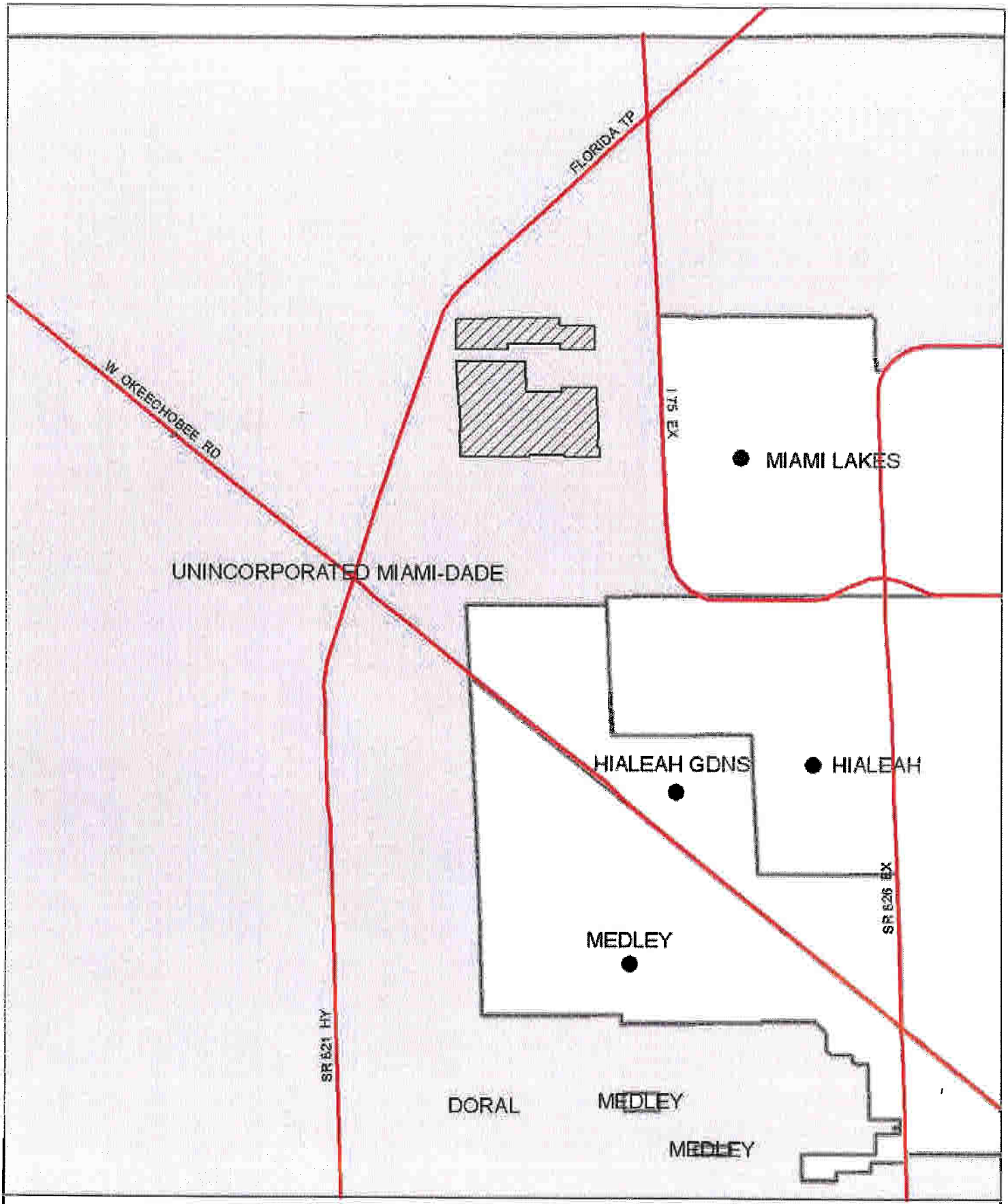
Section 18, Wastewater Management

TABLE 18.1
Wastewater Treatment Demand

Proposed Development			Wastewater Treatment Demand	
Use	**Amount**	**Unit**	**Rate* (Gallons Per Day, GPD)**	**Demand**
Warehouse	4,300,000	Sq. Ft.	0.02 GPD/Sq. Ft.	86,000
Office	750,000	Sq. Ft.	0.10 GDP/Sq. Ft.	75,000
Retail	320,000	Sq. Ft.	0.05 GPD/Sq. Ft.	16,000
Restaurant – Fast Food	338	Seats	35 GPD/Seat	11,830
Restaurant – Full Service	300	Seats	50 GPD/Seat	15,000
Hotel	350	Rooms	100 GPD/Room	35,000
Total Gallons Per Day Demand				238,830

Source: PBS&J

*Wastewater treatment demand rates are derived from sewage flow rates set forth in Metropolitan Dade County Water and Sewer Department's 'Schedule of Daily Rated Gallonage for Various Occupancy'. See ADA Section 18A for a discussion of methods and assumptions used to derive rates for the proposed general use categories from categories provided in the Code.



Source: Miami-Dade GIS 2007; Adapted by The Curtis Group, 2008

N 0 2,000 4,000 8,000 Feet

DRI Boundary

Municipalities

Unincorporated Miami-Dade

Map A (R)
Location Map
Beacon Countyline DRI

PBS&J

An employee-owned company

April 11, 2008

Ms. Bertha Goldenberg
Asst. Director of Regulatory Compliance and Planning
Miami-Dade, Water and Sewer Department
3071 SW 38th Avenue, Suite 547
Miami, FL 33146

SUBJECT: Beacon Countyline DRI – Water and Wastewater Services

Dear Ms. Goldenberg:

The Flagler Development Group proposes to develop a business park on approximately 496 acres in the western part of the City of Hialeah (see enclosed Location Map). The proposed development, called Beacon Countyline, is a development of regional impact (DRI) pursuant to Section 380.06, Florida Statues, and my firm is assisting in preparation of the DRI Application for Development Approval (ADA). This request is based on the premise that both Hialeah and WASD have available interim capacity to serve this project and WASD is in the process of increasing the existing 2.0 MGD to Hialeah in order to provide for the subject project.

ADA Questions 17 and 18 address potential impacts on potable water and wastewater facilities, respectively. These Questions require the DRI applicant to request a letter from the potable water and wastewater service providers addressing the following information:

- the projected excess capacities of the water supply and wastewater treatment facilities to which connection will be made at present and through completion of the project,
- any other commitments that have been made for this excess capacity and
- a statement from the agency or firm's ability to provide services at all times during and after development.

It is our understanding that WASD is a bulk supplier of both water and wastewater services to the City of Hialeah however DERM has requested that a letter of availability be obtained from both WASD and the City. Enclosed is Attachment 'A' that contains Tables 17.1, 17.2 and 18.1 showing the estimates of potable water, non-potable irrigation water and wastewater treatment demands by type of use in the proposed development. Please note that the irrigation water would be supplied from a non potable source and would not affect potable water demand.

It is anticipated that, initially, water supply to the project would rely on the existing capacity that WASD allocates to the City subject to a small increase to the new wholesale agreement. In the future, supply would be supplemented by the proposed water treatment plant to be located next to the project site.

The applicant has begun the process of closing the landfill now on the property and anticipates commencement of development about two years after receiving DRI approval. I would appreciate your reply to the information requirements above with regard to WASD's ability to serve the needs of this project. Please call me at (305) 514-3419 or Jose Gonzalez at Flagler Development Group (305)-520-2372) if you have any questions about this request.

Sincerely

Michael A. Lee, P.E.
Senior Project Manager

001179703
C: / WASD Utility Letter.doc
Enclosures
Cc: J. Gonzalez, FDG
R. Curtis, The Curtis Group

PBSJ

Attachment 'A'

Section 17, Water Supply

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Source: PBS&J			

* Estimates are for application of one inch weekly to areas requiring irrigation, representing usage in a warm period with low rainfall. The estimates assume that 10% of warehouse, office and retail tracts, and 20% of the hotel site, will require irrigation.

Section 18, Wastewater Management

TABLE 18.1
Wastewater Treatment Demand

Proposed Development			Wastewater Treatment Demand	
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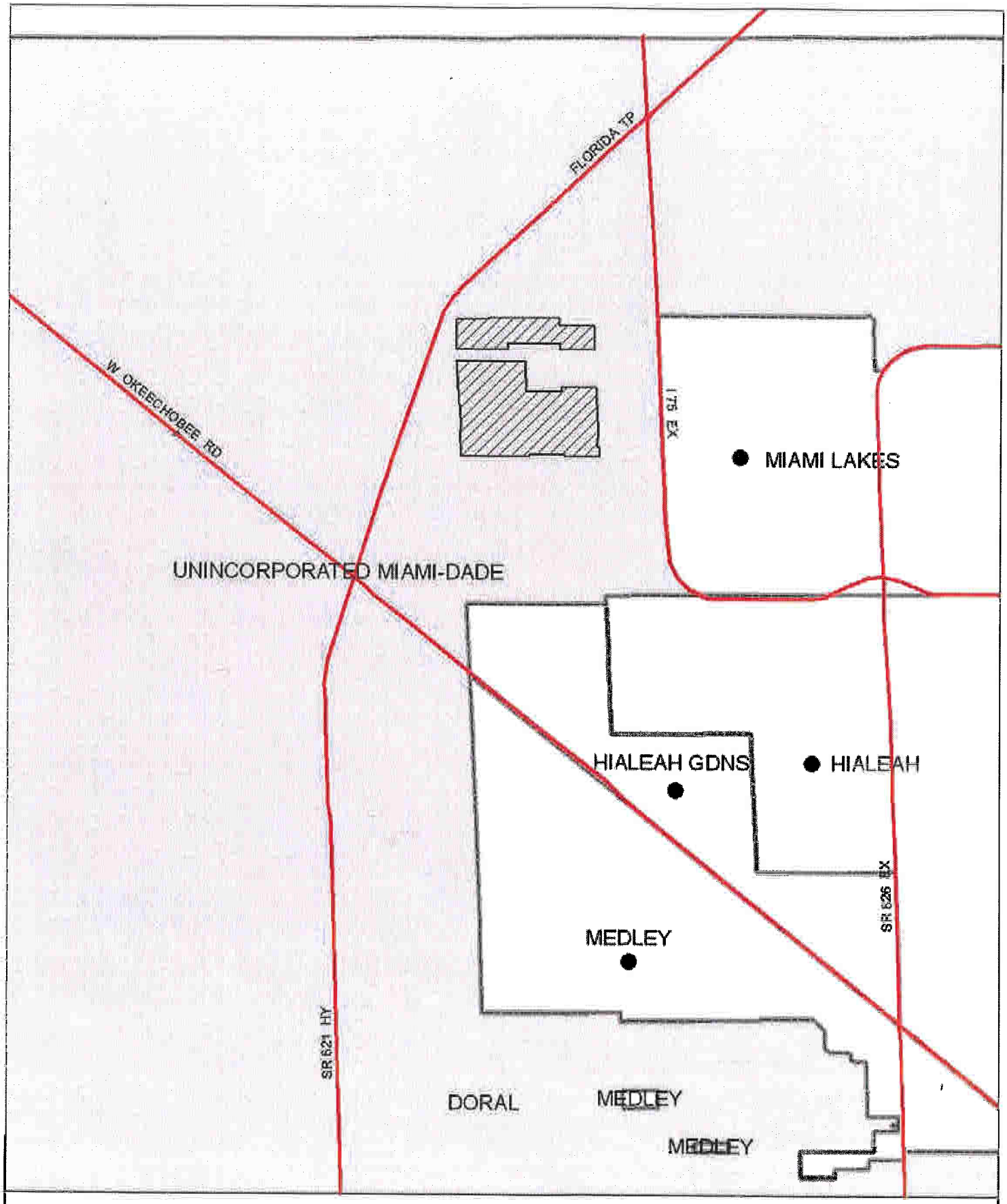
Total Gallons Per Day Demand				238,830

Source: PBS&J

*Wastewater treatment demand rates are derived from sewage flow rates set forth in Metropolitan Dade County Water and Sewer Department's 'Schedule of Daily Rated Gallonage for Various Occupancy'. See ADA Section 18A for a discussion of methods and assumptions used to derive rates for the proposed general use categories from categories provided in the Code.



Source: Miami-Dade GIS 2007; Adapted by The Curtis Group, 2008

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DRI Boundary

Municipalities

Unincorporated Miami-Dade

Map A (R)
Location Map
Beacon Countyline DRI