4.0 EXISTING ONSITE MONITORING PROGRAM

4.1 MONITOR WELL LOCATIONS AND CONSTRUCTION DETAILS

There are presently 16 water quality monitoring wells installed in and around the site. These wells are sampled in accordance with the current operation permit (PA 84-20). All of these monitoring wells and piezometers were installed in the surficial aquifer. The locations for the monitoring wells are shown on **Figure 4-1**. A listing of the existing monitoring wells used for water quality sampling and analysis purposes is presented in **Table 4-1**. Construction details and survey data for the monitoring wells and piezometers are summarized in **Table B-1** in Appendix B.

The monitoring wells were installed to collect water quality samples and to measure water depths in the surficial aquifer for compliance purposes. The piezometers were installed to measure only groundwater levels at different depths in the surficial aquifer. Most of the monitoring wells and piezometers were installed in clusters of two or three, with each monitoring well or piezometer completed to a distinct depth. This approach is consistent with the layering of the surficial aquifer at the site. The shallow well is installed into the upper portion of the aquifer, the intermediate depth well is installed into the upper portion of the water supply production zone (Turnpike aquifer), and the deeper well is installed into the lower portion of the surficial aquifer. The purposes of the well clusters are to detect any variations in water quality with depth and to measure the vertical hydraulic gradients in the surficial aquifer within the site.

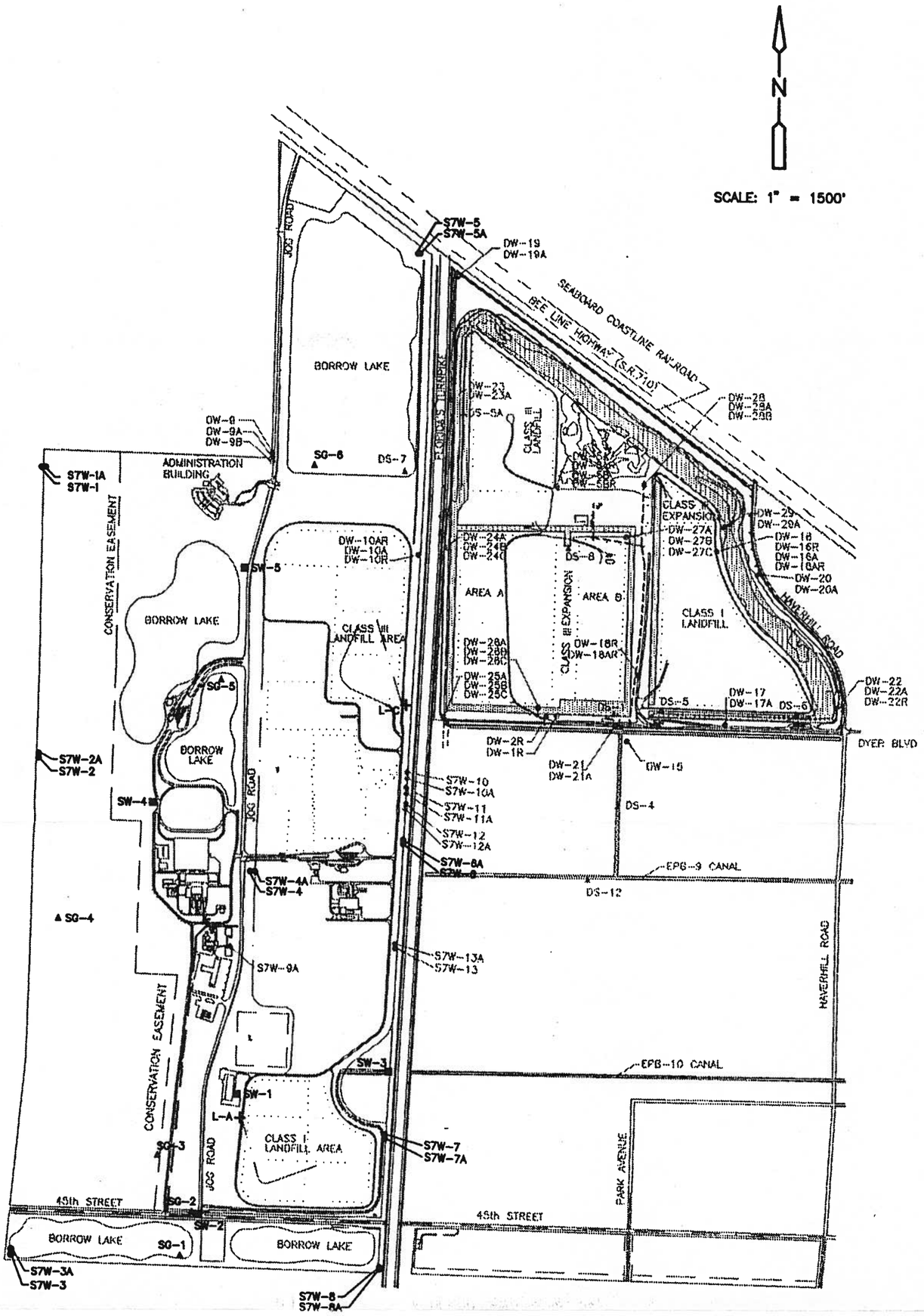
4.2 SURFACE WATER MONITORING

There are five surface water monitoring stations associated with the North County Regional Resource Recovery Facility. Three of the five stations were installed under the Florida Department of Environmental Protection (FDEP) interim surface water monitoring plan, and the remaining two stations were installed as part of the Management and Storage of Surface Waters permit. The description of each sampling station is provided below.

CDM
environmental engineers, scientists, planners, & management consultants

SOLID WASTE AUTHORITY OF PALM BEACH COUNTY

EXISTING GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING NETWORK



LEGEND:

- ▲ STAFF GAUGES
- + LEACHATE QUALITY MONITORING STATIONS
- • GROUNDWATER MONITORING WELLS
- ■ SURFACE WATER QUALITY MONITORING STATION

Figure No. 4-1

TABLE 4-1

EXISTING GROUNDWATER MONITORING NETWORK

Well ID	Unit	Well Depth (feet)	Purpose
S7W-1	Intermediate	57	Background
S7W-1A	Deep	132	Background
S7W-2	Intermediate	52	Background
S7W-2A	Deep	131	Background
S7W-3	Shallow	47	Background
S7W-3A	Deep	158	Background
S7W-4	Intermediate	47	Background
S7W-4A	Deep	126	Background
S7W-5	Intermediate	52	Background
S7W-5A	Deep	129	Background
S7W-6	Intermediate	53	Detection
S7W-6A	Deep	130	Detection
S7W-7	Intermediate	46	Detection
S7W-7A	Deep	126	Detection
S7W-8	Intermediate	47	Detection
S7W-8A	Deep	125	Detection

1. The discharge culvert at the southwest corner of the Class I landfill.
2. The overflow structure at EPB-10 Canal, west of the Class I landfill.
3. The box culvert at EPB-10 Canal, east of the Class I landfill.
4. The discharge culvert at the west corner of the Class II landfill.
5. The discharge culvert at the northwest corner of the Class III landfill.

According to the FDEP approved interim surface water monitoring plan, the surface water monitoring stations 1, 2, 4, and 5 are required to be sampled semi-annually and analyzed for the indicator parameters listed in Section 17-701.510(8)(b), Florida Administrative Code (FAC).

There are six staff gauges installed in select surface water bodies within the site. These staff gauges were installed in 1992. The locations of the staff gauges are shown on Figure 3-1. Water elevations for the six staff gauge locations for the last quarter of 1992 and the first three quarters of 1993 are presented in **Table 4-2.**

4.3 LEACHATE MONITORING

Leachate samples are collected from the wet well of leachate pump station A for the Class I landfill and the wet well of leachate pump station C for the Class III landfill on a quarterly basis. The samples are analyzed quarterly for the parameters listed in Section 17-701.510(8)(c), FAC.

TABLE 4-2

WATER ELEVATIONS AT SELECTED SURFACE WATER STATIONS

Station Location	Water Elevation (feet NGVD)			
	4th Quarter 1992	1st Quarter 1993	2nd Quarter 1993	3rd Quarter 1993
S7G-1	17.50	18.20	16.90	17.00
S7G-2	17.15	17.59	16.76	16.75
S7G-3	17.10	17.80	16.90	16.85
S7G-4	17.75	18.20	17.20	17.40
S7G-5	16.90	17.79	16.90	16.60
S7G-6	15.30	18.90	M	M

M = Staff gauge was missing.