

**General Water Use Permit Application**

Other wells\* not owned by the applicant, including domestic wells, irrigation wells, public supply wells, etc. within the radius of impact.

\*Domestic wells are not shown on District maps; therefore, it is the applicant's responsibility to plot them on the map. However, a list of most of the domestic wells is available from the District by Section-Township-Range which can assist the applicant. For the domestic wells, provide the total depth, casing depth and the depth to which the pump is set, all in feet below land surface.

Wetlands: Show all off-site wetlands that are located within the 0.1 ft. of drawdown at the surface

New Quantities in the Southern Water Use Caution Area - If this application is for new quantities in the SWUCA, the impact assessment must include impacts to Minimum Flows and Levels. See the SWUCA Supplemental Form.

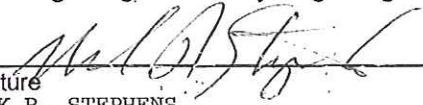
This application is not for new quantities in the SWUCA

This application is for new quantities in the SWUCA

**PART XI. PROFESSIONAL CERTIFICATION**

Any interpretation of geologic or hydrogeologic conditions or parameters in this application must be dated, signed and sealed by a qualified professional who has the expertise and training to make geological and hydrogeological interpretations pursuant to chapters 492 and/or 471, Florida Statutes (F.S.).

I hereby certify that I am a qualified professional pursuant to chapters  492 F.S. or  471 F.S. (check one) to make geological and hydrogeological interpretations for this water use permit application.

  
\_\_\_\_\_  
Signature  
MARK R. STEPHENS  
\_\_\_\_\_  
Print Name

36179  
\_\_\_\_\_  
License No.

28 Feb 2011  
\_\_\_\_\_  
Expiration Date

**PART XII. APPLICANT/OWNER CERTIFICATION**

All landowners described in this application must be included as applicants of this permit. Attach all signatures to a document that attests that they are aware of this application and agree to its content, or that they have empowered the signer below with authority to submit this application on their behalf.

Attached  Not applicable

**BUSINESS ENTITY AS APPLICANT** – If the permit applicant is a business entity, indicate the type of business entity below and provide the name and title of the person signing on behalf of the business entity. Attach documentation of the status of the business entity to legally operate in the State of Florida, such as a copy of the last corporate annual report submitted to the Florida Department of State or a Certificate of Status issued by Florida Department of State.

Florida Corporation  Florida General Partnership  Florida Limited Liability Company

Florida Limited Partnership  Foreign Corporation/Partnership  Trust

Other: \_\_\_\_\_

I hereby certify that the information contained herein is true and accurate and that I have legal authority to undertake the activities described herein and execute this application.

\_\_\_\_\_  
Applicant Signature/Consultant or Contact Signature\*  
JAMES P. MORRIS  
\_\_\_\_\_  
Name and title if signing as business entity applicant

\_\_\_\_\_  
Date

\* A consultant or contact must include signed documentation of authority to sign and submit this application.

**General Water Use Permit Application**

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Signature \_\_\_\_\_ 36179 \_\_\_\_\_ 28 Feb 2011 \_\_\_\_\_  
MARK R. STEPHENS License No. Expiration Date  
Print Name \_\_\_\_\_

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 Florida Limited Partnership  Foreign Corporation/Partnership  Trust  
 Other: \_\_\_\_\_

I hereby certify that the information contained herein is true and accurate and that I have legal authority to undertake the activities described herein and execute this application.

Applicant Signature/Consultant or Contact Signature\* \_\_\_\_\_ Date May 20, 2010  
JAMES P. MORRIS  
Name and title if signing as business entity applicant \_\_\_\_\_

\* A consultant or contact must include signed documentation of authority to sign and submit this application.

General Water Use Permit Application

**LIST OF ATTACHMENTS**

	Attached	Not applicable
• Documentation of ownership	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Copy of current lease	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Service Agreement	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Description of "other legal property control"	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• MSSW/ERP/AGSWM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Contract or agreement with offsite water supplier	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Historic documentation of imported water, reclaimed or other alternative water supply	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Copy of caliper or video logs	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Alternative water supply feasibility report	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Stormwater capture calculations	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Impact assessment/analysis	<input checked="" type="checkbox"/>	blank by intention
• Professional certifications	<input checked="" type="checkbox"/>	blank by intention
• Co-owner signature authority document	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Consultant or Contact signature authority document	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Southwest Florida  
Water Management District

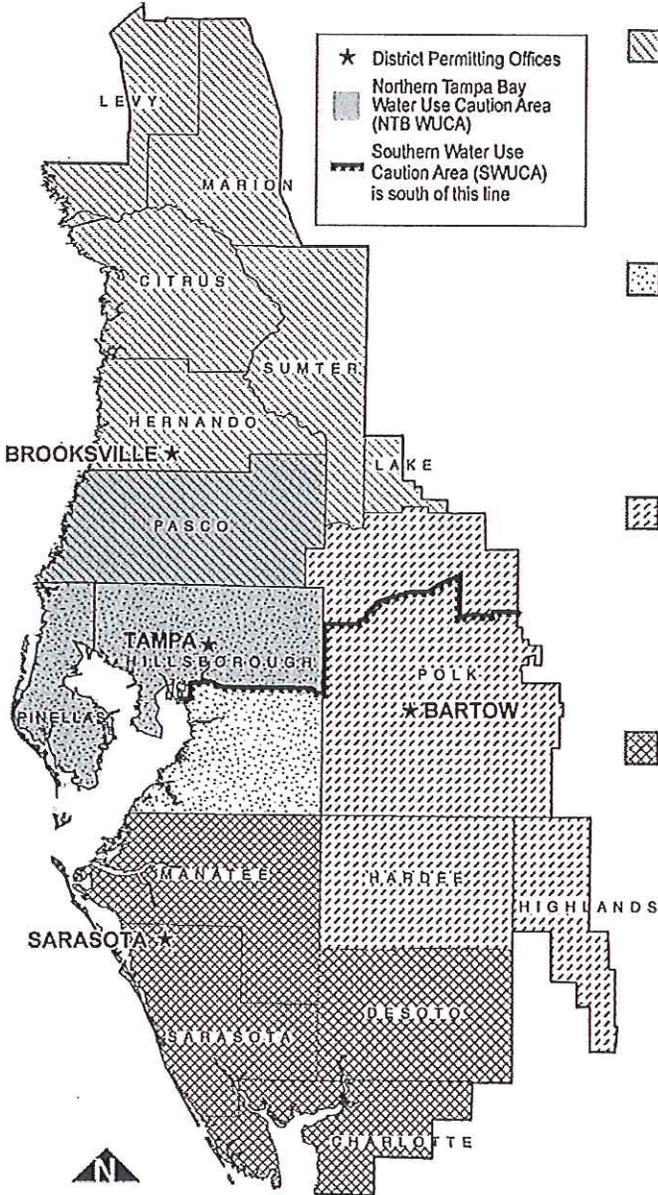


WATERMATTERS.ORG • 1-800-423-1476

## Southwest Florida Water Management District

Applicants for water use and environmental resource permits may submit their applications to any District Permitting Office; however, it is recommended to submit them to the Permitting Office within the Service Region where their property is located. All activities concerning these permits will be conducted at these Permitting Offices. Applications for well construction permits may also be submitted to any Permitting Office; however, applications for well construction permits in Marion, Sarasota and Manatee Counties are evaluated and issued locally by county agencies.

### Resource Regulation Service Regions



### Resource Regulation Permitting Offices

■ **Brooksville Regulation Department**  
*Citrus, Hernando, Lake, Levy, Marion, Pasco, Sumter counties.*  
2379 Broad Street  
Brooksville, FL 34604-6899  
(352) 796-7211 or 1-800-423-1476 (FL only)  
Fax: (352) 540-6027; Suncom: 628-4150

■ **Tampa Regulation Department**  
*Hillsborough, Pinellas counties.*  
7601 U.S. Hwy. 301  
Tampa, FL 33637-6759  
(813) 985-7481 or 1-800-836-0797 (FL only)  
Fax: (813) 987-6747; Suncom: 587-2070

■ **Bartow Regulation Department**  
*Hardee, Highland, Polk counties.*  
170 Century Boulevard  
Bartow, FL 33830-7700  
(863) 534-1448 or 1-800-492-7862 (FL only)  
Fax: (863) 534-7058; Suncom: 572-6200

■ **Sarasota Regulation Department**  
*Charlotte, DeSoto, Manatee, Sarasota counties.*  
6750 Fruitville Road  
Sarasota, FL 34240-9711  
(941) 377-3722 or 1-800-320-3503 (FL only)  
Fax: (941) 373-7660; Suncom: 531-6900

TDD: 1-800-231-6103 (FL only) for hearing assistance for all locations.

The District does not discriminate based on disability. Anyone requiring reasonable accommodation as provided for in the Americans with Disabilities Act should contact the Permitting Office for their location or the Regulation Performance Management Department at (352) 796-7211 or 1-800-423-1476 (FL only).

# WATER USE PERMIT APPLICATION MINING AND DEWATERING MATERIALS OTHER THAN PHOSPHATE

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SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

2379 BROAD STREET  
BROOKSVILLE, FLORIDA 34604-6899  
(352) 796-7211 or 1-800-423-1476 (FL only)  
TDD only: 1-800-231-6103 (FL only)

**WATER USE PERMIT APPLICATION  
MINING AND DEWATERING MATERIALS OTHER THAN PHOSPHATE**

THIS APPLICATION FORM IS A STAND-ALONE FORM FOR MINING AND DEWATERING WATER USE FOR NON-PHOSPHATE MATERIALS ONLY. NO OTHER APPLICATION FORM IS REQUIRED UNLESS THIS PERMIT LOCATION IS IN THE SOUTHERN WATER USE CAUTION AREA\*. THIS INFORMATION IS REQUESTED IN ACCORDANCE WITH RULES 40D-2.101 AND 40D-2.301, FLORIDA ADMINISTRATIVE CODE.

\* Applicants in the Southern Water Use Caution Area (SWUCA) submitting this application in hard copy must also attach the SWUCA Supplemental Form (Form LEG-R.007.02 (04/09).)

Answer all questions. If a question is not applicable to the operation that is the subject of this application, enter N/A. If more space is needed to answer a question, attach additional sheets and refer to the application page and question number. Check attachment boxes if an attachment is included with this application. If there are other activities on this property for which water is required (such as agricultural or irrigation for reclamation of mined lands), submit an appropriate supplemental form for that water use activity. Minor water uses typically associated with all water use types (minor irrigation of the office compound lawn, potable/sanitary use for employees, and fire suppression) are included on this form.

If submitting in hard copy, submit an original plus two copies of the application, documents, drawings, cross sections, maps, etc. If documents include color-coding as part of the explanation, then the copies must be in color also.

**PART I. ADMINSTRATIVE INFORMATION**

A. **APPLICANT:** The applicant must be a landowner for the property covered by this application. If there are multiple landowners, all must be listed as co-applicants and the same administrative information must be listed for all applicants on an attachment. If the property is owned by a business entity, list the business entity as the applicant.

The permit will be issued in the names of all persons or entities as listed on the deed for the property. If the applicant wants to include the name of any lessees, they may also be listed. All correspondence will be addressed to all applicants listed here with copies to all designated contacts or consultants. This application must be signed by all applicants.

Name: CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC Telephone: ( 352 ) 796-3522

Address: 11430 Camp Mine Road Cell Phone: ( 352 ) 303-3563

City, State, ZIP: Brooksville, FL 34601 Email: JPMORRIS@CEMEXUSA.COM

Project Name: CENTER HILL MINE County(ies): SUMTER

List Section-Township-Range(s): S16/17/20/21 T21S R23E

Address of Mining or Dewatering site: 528 WEST KINGS HIGHWAY, CENTER HILL, FL 33514

Attachments for co-applicants are included.

B. **TYPE OF APPLICATION** (check one):  New  Renewal  Modification

If this is an application for water use on property for which the water use permit was allowed to expire, check here and indicate the former permit number. \_\_\_\_\_

C. **WATER USE PERMIT (WUP) NUMBER:** 20000231.009 (renewals or modifications only)

D. **THIS APPLICATION IS FOR:**  A new mining or dewatering operation  
 An expansion of an existing mining or dewatering operation  
 Existing mining or dewatering operation that is not expanding

E. **MATERIALS MINED:**  Limestone  Sand/Gravel  Shell  Peat  Other (describe): \_\_\_\_\_

F. **PERMIT TERM:** If this is an application for a modification, the existing permit term typically will apply. If this is an application for a new permit or for renewal of an existing permit, please check the permit term requested:  
 6 years  10 years If a permit term greater than 10 years is requested, attach an explanation for the need.

G. **CONSULTANT:** This is a person who may be employed to assist the applicant with their application. If there is a designated consultant for the District to contact regarding this application, please provide their name, address, telephone number and email address below. A copy of all correspondence with the applicant will be copied to the consultant until such time as the permit is issued. *An applicant can have both a consultant and a contact (see immediately below), and they can be the same or different persons.*

Not applicable. There is no consultant.

Name: MARK R. STEPHENS, P.G., P.E. Telephone: ( 863 ) 669 - 9191  
 Address: 2031 E. EDGEWOOD DRIVE, SUITE 5 Cell Phone: ( 863 ) 670 - 1189  
 City, State, ZIP: LAKELAND, FL 33803 Email: STEPHENSMR@CS.COM  
 Company: THE COLINAS GROUP, INC.

H. **CONTACT:** This is a person other than the permittee who handles all correspondence including compliance correspondence on behalf of the permittee after the permit is issued. If you wish to designate a person for the District to contact regarding the application and permit, please provide contact information below. A copy of all correspondence with the contact will be copied to the permittee.

Not applicable. The applicant is the contact.

Name: JAMES P. MORRIS Telephone: ( 352 ) 796-3522  
 Address: 11430 Camp Mine Road Cell Phone: ( 352 ) 303-3563  
 City, State, ZIP: Brooksville, FL 34601 Email: jpmorris@cemexusa.com  
 Company: CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC

**PART II. PROPERTY CONTROL**

A. **NEW AND RENEWAL APPLICATIONS:** Provide documentation of ownership or legal control of the property (control that is other than direct ownership).  Attached

B. **THE PROPERTY TO BE INCLUDED IN THIS PERMIT IS:**

- Owned by the applicant.
- Legally controlled by the applicant, excluding a lease (this pertains to legal control, such as estate trustees).

Acreege owned and/or controlled: +/- 994.9 acres

C. **LEASED PROPERTY:** If a lease is pertinent to this application, indicate the following:

Applicant is the lessor. If a lessee of the applicant/owner's property is to be a co-applicant, provide either a copy of the lease or a letter describing the lease arrangement and duration.

Attached  Not Applicable

Applicant is the lessee. This applies when the applicant is leasing property on which water is to be used from the applicant's withdrawal facilities for the applicant's use.

Indicate the number of acres under lease: \_\_\_\_\_

Provide either a copy of the lease or a letter describing the lease arrangement and duration.

Attached  Not applicable

- D. **SERVICED PROPERTY:** This applies to land for which the applicant will provide water for another property owner's use. The applicant does not have a lease on this property, there is no water use permit for the property, and there are no withdrawal facilities on the property. The water use will be included on this permit.

Indicate the number of acres serviced: \_\_\_\_\_

Provide a copy of the service agreement describing the service arrangement and duration.

Attached  Not applicable

**NOTE:** When a lessee is listed as a co-applicant, permits will not be issued for a period longer than the lease unless the lease is renewable. If renewable, the applicants will be required to provide a copy of the renewed lease at the appropriate time. All property owners and lessees must sign this application.

### PART III. RELATED PERMITTING/APPROVALS

#### A. ENVIRONMENTAL RESOURCE PERMIT

Check the situation that applies to the operation that is the subject of this application:

- This mining or dewatering activity is exempt from the requirement to obtain a surface water management permit. Provide documentation showing the exemption status of the mine(s) to be included in this WUP.

Attached

- A surface management water permit (Management and Storage of Surface Water [MSSW] or Environmental Resource Permit [ERP]) exists for the activity for which this application is submitted.

MSSW/ERP No.: ERP 0211510-006

- A surface water management permit already exists (MSSW/ERP No. ERP 0211510-006), but needs to be modified to include the proposed activity.

An application for modification was submitted on \_\_\_\_\_ (mm/dd/yyyy), and was deemed complete for approval on \_\_\_\_\_ (mm/dd/yyyy)

An application for modification has not been submitted. **Note:** A WUP will not be issued for mining/dewatering activity until an ERP has been issued or an application for one is deemed complete for approval.

- A surface water management permit does not exist for the activity for which this application is submitted.

An application was submitted on \_\_\_\_\_ (mm/dd/yyyy), and it was deemed complete for approval on \_\_\_\_\_ (mm/dd/yyyy).

An application is not submitted. It will be submitted \_\_\_\_\_

**Note:** If an ERP is required, a WUP will not be issued for mining/dewatering activity until an ERP has been issued or an application for one is deemed complete for approval.

#### B. INDUSTRIAL WASTEWATER (IWW) PERMIT

Has an IWW permit been issued for the area covered by this application for sorting and grading activities?

Yes IWW Permit No.: \_\_\_\_\_

No, the application was submitted \_\_\_\_\_

No, there will be no sorting and grading on-site.

#### C. FACILITATING AGRICULTURAL RESOURCE MANAGEMENT SYSTEMS (FARMS) PROJECT

Will the mine become an alternative water supply source under a District FARMS project?

Yes FARMS Application or Project No.: \_\_\_\_\_

No

#### D. NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (U.S. Environmental Protection Agency permit issued by the Florida Department of Environmental Protection)

Will there be off-site discharge from this site due to the proposed activities?

Yes NPDES Permit No(s): FL0031895-003-IW3S

Yes, the application was submitted \_\_\_\_\_

No; there will not be off-site discharge of water.

**PART IV. GEOLOGIC AND HYDROLOGIC EVALUATION**

- A. **PROSPECT MAP AND REPORT:** Submit a geologic and hydrologic report and plan-view map showing locations of soil borings, test cores, drill cuttings, and geophysical analyses that provide information on overburden thickness and disposition, depth and thickness of the material to be mined, water table elevations and other pertinent aquifer water elevations for the wet and dry season. In the geological report, include the geologic descriptions of the soil borings, test cores and drill cuttings as well as the interpreted geophysical analyses. If a geological study was done on the material to be mined, include a copy. Reference all elevations, levels and depths to National Geodetic Vertical Datum of 1929 (NGVD29). New mining/dewatering applications are to use North American Vertical Datum of 1988 (NAVD88). Show the datum reference on all maps and all data collection sites on an aerial photographic map.
- B. **MINING OPERATIONS MAP:** Submit a plan-view map of the existing and proposed mining plans for the duration of this permit. Show all components of the mining operation including any pre-mitigation measures, such as hydraulic recharge/intercept ditches, setback distances, etc. Provide length, depth and width information for all proposed mines and pre-mitigation constructions. Show the locations of the cross sections required below, clearly labeled (e.g., A-A'; B-B'. etc.). Indicate any off-site water bodies that are receiving discharge from this site and label it with the water body name.
- C. **CROSS SECTIONS:** Provide a minimum of two perpendicularly transecting cross sections (preferably north-south and east-west) that encompass the entire mine pit for each area to be mined. Each cross section must show (1) pre-mining land surface elevations, (2) depth of overburden, (3) depth of material to be mined, (4) wet and dry season pre-mining water table or aquifer water level elevations, and (5) maximum depth to be dewatered, if dewatering will occur. If dewatering will occur in successive stages, provide two transecting cross sections for each stage. Cross sections must also be provided that transect any existing or proposed hydraulic recharge/intercept ditches and include both the ditch and the associated mine pit. Depict the cone of influence on the water table or aquifer level at maximum dewatered depth of the mine pit relative to the location and depth of the ditch. The mine pit and hydraulic recharge/intercept ditches must be shown at scaled proposed distances from each other. Reference each cross section to the map required above. Reference all elevations, levels and depths to NGVD29 or NAVD88 per the Prospect Map and Report.

**PART V. WITHDRAWAL POINT INFORMATION**

**Note:** This part pertains to sources of water required for a use, not dewatering wells or surface water withdrawal points to be used to dewater overburden or matrix. Those will be addressed in a later parts of the application.

**A. GROUNDWATER WELLS**

List all wells that are greater than 2 inches in outside diameter that are on the property. All wells must be included in the table below, whether active or inactive (capped, standby) and whether existing or proposed. Provide an identification number (Owner ID number) for the wells, and complete the column below with requested information. All depths are feet below land surface.

Not Applicable. Groundwater wells are not used or to be used as a source of water at this project. Skip to Section B (page 6)

	Owner ID No.	Owner ID No.	Owner ID No.
	# WP-3	# WP-4	# WP-5
District ID No. <i>Assigned by District if included on existing WUP; if not, leave blank.</i>	# 3	# 4	# 5
Status	<input checked="" type="checkbox"/> Existing <input type="checkbox"/> Proposed <input type="checkbox"/> Plugged <input type="checkbox"/> Capped	<input checked="" type="checkbox"/> Existing <input type="checkbox"/> Proposed <input type="checkbox"/> Plugged <input type="checkbox"/> Capped	<input checked="" type="checkbox"/> Existing <input type="checkbox"/> Proposed <input type="checkbox"/> Plugged <input type="checkbox"/> Capped

**PART IV. GEOLOGIC AND HYDROLOGIC EVALUATION**

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Not Applicable. Groundwater wells are not used or to be used as a source of water at this project. **Skip to Section B (page 6)**

	Owner ID No.	Owner ID No.	Owner ID No.
	# WP-32	#	#
<b>District ID No.</b> <i>Assigned by District if included on existing WUP; if not, leave blank.</i>	# 32	#	#
<b>Status</b>	<input checked="" type="checkbox"/> Existing <input type="checkbox"/> Proposed <input type="checkbox"/> Plugged <input type="checkbox"/> Capped	<input type="checkbox"/> Existing <input type="checkbox"/> Proposed <input type="checkbox"/> Plugged <input type="checkbox"/> Capped	<input type="checkbox"/> Existing <input type="checkbox"/> Proposed <input type="checkbox"/> Plugged <input type="checkbox"/> Capped

(Withdrawal Table Continued)

Owner ID / District ID	WP-3 / 3	WP-4 / 4	WP-5 / 5
<b>Function</b>	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input checked="" type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input checked="" type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input checked="" type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____
<b>Aquifer</b> <i>Aquifer/aquifer system from which water is withdrawn. For recharge wells, system where water is injected.</i>	<input type="checkbox"/> Surficial Aquifer System <input type="checkbox"/> Intermediate Aquifer System <input type="checkbox"/> Intermediate and Upper Floridan Aquifer Systems <input type="checkbox"/> Upper Floridan Aquifer System	<input type="checkbox"/> Surficial Aquifer System <input type="checkbox"/> Intermediate Aquifer System <input type="checkbox"/> Intermediate and Upper Floridan Aquifer Systems <input checked="" type="checkbox"/> Upper Floridan Aquifer System	<input type="checkbox"/> Surficial Aquifer System <input type="checkbox"/> Intermediate Aquifer System <input type="checkbox"/> Intermediate and Upper Floridan Aquifer Systems <input checked="" type="checkbox"/> Upper Floridan Aquifer System
<b>Pump Capacity</b>	50 gpm	150 gpm	50 gpm
<b>Mainline Diameter</b>	4.0 inches	4.0 inches	2.0 inches
<b>Metered</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Meter Type</b> <i>(if currently metered)</i>	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____
<b>Meter serial number</b> <i>(if currently metered)</i>			
<b>Well Construction Permit Number.</b> <i>(If not known, write UNK)</i>	UNK	UNK	UNK
<b>Construction Date</b> <i>Completion date for operation or anticipated completion date.</i>	1975 (mm/yyyy)	1975 (mm/yyyy)	1975 (mm/yyyy)
<b>Casing Diameter</b> <i>(outer at land surface)</i>	4.0 inches	6.0 inches	3.0 inches
<b>Total Depth*</b>	UNK	300	135
<b>Casing Depth*</b>	UNK	83	UNK
<b>Liner Top Depth*</b>	NA	NA	NA
<b>Liner Bottom Depth*</b>	NA	NA	NA
<b>Pump Bowl Depth*</b>	UNK	UNK	UNK
<b>Annual Average Quantity</b>	2,000 gpd	16,000 gpd	1,000 gpd
<b>Peak Month Quantity</b>	3,000 gpd	23,000 gpd	2,000 gpd
<b>Full Standby**</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Partial Standby***</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Routine Annual Average Quantities: _____ gpd SB Annual Average Quantities: _____ gpd	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Routine Annual Average Quantities: _____ gpd SB Annual Average Quantities: _____ gpd	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Routine Annual Average Quantities: _____ gpd SB Annual Average Quantities: _____ gpd

\* For proposed wells, indicate proposed design depths.

\*\*Well not to be used unless another withdrawal point or off-site alternative water supply source becomes unavailable

\*\*\*Well routinely used but on standby if another withdrawal point or off-site alternative water supply source becomes unavailable.

(Withdrawal Table Continued)

Owner ID / District ID	WP-32 / 32	/	/
Function	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input checked="" type="checkbox"/> Materials Processing <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____
Aquifer <i>Aquifer/aquifer system from which water is withdrawn. For recharge wells, system where water is injected.</i>	<input type="checkbox"/> Surficial Aquifer System <input type="checkbox"/> Intermediate Aquifer System <input type="checkbox"/> Intermediate and Upper Floridan Aquifer Systems <input checked="" type="checkbox"/> Upper Floridan Aquifer System	<input type="checkbox"/> Surficial Aquifer System <input type="checkbox"/> Intermediate Aquifer System <input type="checkbox"/> Intermediate and Upper Floridan Aquifer Systems <input type="checkbox"/> Upper Floridan Aquifer System	<input type="checkbox"/> Surficial Aquifer System <input type="checkbox"/> Intermediate Aquifer System <input type="checkbox"/> Intermediate and Upper Floridan Aquifer Systems <input type="checkbox"/> Upper Floridan Aquifer System
Pump Capacity	40 gpm		
Mainline Diameter	4.0 inches		
Metered	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Meter Type <i>(if currently metered)</i>	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____
Meter serial number <i>(if currently metered)</i>			
Well Construction Permit Number. <i>(If not known, write UNK)</i>	UNK		
Construction Date <i>Completion date for operation or anticipated completion date.</i>	1996 (mm/yyyy)		
Casing Diameter <i>(outer at land surface)</i>	4.0 inches		
Total Depth*	100		
Casing Depth*	40		
Liner Top Depth*	NA		
Liner Bottom Depth*	NA		
Pump Bowl Depth*	UNK		
Annual Average Quantity	1,000 gpd		
Peak Month Quantity	2,000 gpd		
Full Standby**	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Partial Standby***	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Routine Annual Average Quantities: _____ gpd SB Annual Average Quantities: _____ gpd	<input type="checkbox"/> Yes <input type="checkbox"/> No Routine Annual Average Quantities: _____ gpd SB Annual Average Quantities: _____ gpd	<input type="checkbox"/> Yes <input type="checkbox"/> No Routine Annual Average Quantities: _____ gpd SB Annual Average Quantities: _____ gpd

\* For proposed wells, indicate proposed design depths.

\*\*Well not to be used unless another withdrawal point or off-site alternative water supply source becomes unavailable

\*\*\*Well routinely used but on standby if another withdrawal point or off-site alternative water supply source becomes unavailable.

1. Describe the future use of all capped wells. If there are multiple wells that are or are to be in capped status, reference the Owner ID numbers:

NA

2. List any wells (District ID number or Owner ID number) for which a caliper or video log has been created but has not been previously submitted to the District.

NA

3. Submit a copy of the log and check the type that applies:  Video  Caliper  Not applicable

**B. SURFACE WATER WITHDRAWAL POINTS USED TO PROVIDE WATER**

List and provide information for all surface water withdrawal points from a surface water body (pond, pit, lake, or other impoundment, stream, river or canal) that are used to provide water for a use where the outside diameter of the withdrawal pipe or the sum of the outside diameters of the withdrawal pipes is 4 inches or greater. Include existing, inactive (those where the pump and pipe assembly still exist but are not used) and proposed surface water withdrawal points.

Not Applicable. There are no surface water withdrawal points used to provide water at this project. Skip to Section C (page 7).

*Information for withdrawals from recirculation or settling ponds is in the Alternative Water Supply Section. Information regarding surface water withdrawal points used for dewatering purposes is in PART IV, Mining Operations and Methods.*

	Owner ID No.	Owner ID No.	Owner ID No.
	WP-33		
District ID No. <i>(if existing)</i>			
Name/Number of Water Body or Settling/Recirculation Pond	South Quarry		
Source Type	<input type="checkbox"/> Natural <input type="checkbox"/> Created - Lined <input checked="" type="checkbox"/> Created - Unlined	<input type="checkbox"/> Natural <input type="checkbox"/> Created - Lined <input type="checkbox"/> Created - Unlined	<input type="checkbox"/> Natural <input type="checkbox"/> Created - Lined <input type="checkbox"/> Created - Unlined
Water Body Type	<input checked="" type="checkbox"/> Borrow Pit <input type="checkbox"/> Pond /Lake <input type="checkbox"/> Reservoir <input type="checkbox"/> Canal <input type="checkbox"/> River/Stream	<input type="checkbox"/> Borrow Pit <input type="checkbox"/> Pond /Lake <input type="checkbox"/> Reservoir <input type="checkbox"/> Canal <input type="checkbox"/> River/Stream	<input type="checkbox"/> Borrow Pit <input type="checkbox"/> Pond/Lake <input type="checkbox"/> Reservoir <input type="checkbox"/> Canal <input type="checkbox"/> River/Stream
Acreage <i>(Put "N/A" if flowing water body.)</i>	57 +/- acres	acres	acres
Status	<input checked="" type="checkbox"/> Existing <input type="checkbox"/> Proposed <input type="checkbox"/> Dismantled	<input type="checkbox"/> Existing <input type="checkbox"/> Proposed <input type="checkbox"/> Dismantled	<input type="checkbox"/> Existing <input type="checkbox"/> Proposed <input type="checkbox"/> Dismantled
Intake Diameter <i>Outside diameter of pipe</i>	2 inches	inches	inches
Mainline Diameter	2 inches	inches	inches

(Surface Water Withdrawal Points Continued)

Owner ID / District ID	WP-33 / 33	/	/
Function	<input checked="" type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Repump <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Repump <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Repump <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____
Construction Date <i>(installation into water body)</i>	_____ (mm/yyyy)	_____ (mm/yyyy)	_____ (mm/yyyy)
Pump Capacity	50 gpm	gpm	gpm
Currently Meter	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Meter Type <i>(if currently metered)</i>	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____
Meter Serial Number <i>(if currently metered)</i>			
Annual Average Quantity	25,000 gpd	gpd	gpd
Peak Month Quantity	50,000 gpd	gpd	gpd
Standby	<input type="checkbox"/> Full <input type="checkbox"/> Partial <input checked="" type="checkbox"/> No	<input type="checkbox"/> Full <input type="checkbox"/> Partial <input type="checkbox"/> No	<input type="checkbox"/> Full <input type="checkbox"/> Partial <input type="checkbox"/> No
Standby Annual Average Quantities <i>(leave blank if this withdrawal point is not on Full or Partial standby)</i>	NA gpd	gpd	gpd

**C. ALTERNATIVE WATER SUPPLY (AWS)**

“Alternative water supply” (AWS) describes water that has been reclaimed after one or more public supply, municipal, industrial, commercial or agricultural uses; the downstream augmentation of water bodies with reclaimed water; storm water; or any other water supply source that is designated as non-traditional for a water supply planning region in the applicable regional water supply plan. Other alternative water supplies are: saltwater; brackish surface water or brackish ground water; surface water captured predominately during wet-weather flows; sources made available through the addition of new storage capacity for surface or ground water. Inclusion of reclaimed water and seawater in this definition does not alter the exemption from water use permitting for these sources (see the Water Use Permit Information Manual, Part B, Basis of Review, Section 1.2).

Not applicable. Use of an alternative water supply is not anticipated during the term of this permit.

*If you checked “not applicable,” attach a report on your investigation of the feasibility of using alternative water supply to reduce withdrawals from the resource. If the report states that use of an alternative water supply was found to be infeasible, the reason must be fully documented. Infeasibility can include unavailability or that it is cost prohibitive.*

AWS Feasibility Report attached. **Skip to PART VI MINING OPERATIONS AND METHODS (page 10)**

(Surface Water Withdrawal Points Continued)

Owner ID / District ID	_____ / _____	_____ / _____	_____ / _____
Function	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Repump <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Repump <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Repump <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____
Construction Date <i>(installation into water body)</i>	_____ (mm/yyyy)	_____ (mm/yyyy)	_____ (mm/yyyy)
Pump Capacity	_____ gpm	_____ gpm	_____ gpm
Currently Meter	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Meter Type <i>(if currently metered)</i>	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter Data units if other than gallons: _____
Meter Serial Number <i>(if currently metered)</i>	_____	_____	_____
Annual Average Quantity	_____ gpd	_____ gpd	_____ gpd
Peak Month Quantity	_____ gpd	_____ gpd	_____ gpd
Standby	<input type="checkbox"/> Full <input type="checkbox"/> Partial <input type="checkbox"/> No	<input type="checkbox"/> Full <input type="checkbox"/> Partial <input type="checkbox"/> No	<input type="checkbox"/> Full <input type="checkbox"/> Partial <input type="checkbox"/> No
Standby Annual Average Quantities <i>(leave blank if this withdrawal point is not on Full or Partial standby)</i>	_____ gpd	_____ gpd	_____ gpd

**C. ALTERNATIVE WATER SUPPLY (AWS)**

“Alternative water supply” (AWS) describes water that has been reclaimed after one or more public supply, municipal, industrial, commercial or agricultural uses; the downstream augmentation of water bodies with reclaimed water; storm water; or any other water supply source that is designated as non-traditional for a water supply planning region in the applicable regional water supply plan. Other alternative water supplies are: saltwater; brackish surface water or brackish ground water; surface water captured predominately during wet-weather flows; sources made available through the addition of new storage capacity for surface or ground water. Inclusion of reclaimed water and seawater in this definition does not alter the exemption from water use permitting for these sources (see the Water Use Permit Information Manual, Part B, Basis of Review, Section 1.2).

Not applicable. Use of an alternative water supply is not anticipated during the term of this permit.

*If you checked “not applicable,” attach a report on your investigation of the feasibility of using alternative water supply to reduce withdrawals from the resource. If the report states that use of an alternative water supply was found to be infeasible, the reason must be fully documented. Infeasibility can include unavailability or that it is cost prohibitive.*

AWS Feasibility Report attached. **Skip to PART VI MINING OPERATIONS AND METHODS (page 10)**

1. **AWS Supplier:** If you received AWS or will receive AWS during the upcoming or remaining permit term from an offsite supplier, please provide the information below for the supplier. If the supplier has a water use permit (WUP), provide the WUP number. Submit a copy of the contract or agreement between you and the supplier that shows contract amounts and cost per 1,000 gallons.

N/A AWS is Self-Supplied only. Skip to "Number 2, AWS Facilities".

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Telephone ( ) \_\_\_\_\_ Email: \_\_\_\_\_ WUP No. \_\_\_\_\_  
(if the supplier has one)

Contract Attached

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Telephone ( ) \_\_\_\_\_ Email: \_\_\_\_\_ WUP No. \_\_\_\_\_  
(if the supplier has one)

Contract Attached

Attach the same information for additional suppliers.  Attached

2. **AWS Facilities:** Complete the table below and on the next page with information on the type of AWS and facilities used. All of these are listed as withdrawal points on the permit. Include AWS types even if a water use permit is not required for its use.

- a. Inflow: A line that brings offsite AWS onto the property.
- b. Repump: The withdrawal point used to pump AWS that is derived offsite from a containment facility (pond, lake, etc.) if such a containment facility is used. Note: If there is repump of AWS, there is an inflow and both the augmentation source (the inflow line onto the property) and the repump facility must be listed. However, if the AWS source is self-supplied, only the repump facility must be listed.
- c. Self-supplied: The place where self-generated AWS leaves the site of origin or storage for its use. It is neither inflow nor repump but will be indicated as self-supplied AWS source in the table below.

**AWS Facilities Table**

	Owner ID No.	Owner ID No.	Owner ID No.
District ID No.			
Status	<input type="checkbox"/> Existing <input type="checkbox"/> Standby <input type="checkbox"/> Proposed <input type="checkbox"/> Dismantled	<input type="checkbox"/> Existing <input type="checkbox"/> Standby <input type="checkbox"/> Proposed <input type="checkbox"/> Dismantled	<input type="checkbox"/> Existing <input type="checkbox"/> Standby <input type="checkbox"/> Proposed <input type="checkbox"/> Dismantled
Type	<input type="checkbox"/> Inflow <input type="checkbox"/> Repump <input type="checkbox"/> Self-Supplied	<input type="checkbox"/> Inflow <input type="checkbox"/> Repump <input type="checkbox"/> Self-Supplied	<input type="checkbox"/> Inflow <input type="checkbox"/> Repump <input type="checkbox"/> Self-Supplied
Pump Capacity	_____ gpm	_____ gpm	_____ gpm
Currently Metered	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Meter Type (if currently metered)	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter
Meter Owner <i>Applicant or supplier.</i>			
Meter Serial Number (if currently metered)			

(AWS Facilities Table continued)

Owner ID/District ID	_____ / _____	_____ / _____	_____ / _____
<b>Function</b> <i>Reason for the water</i>	<input type="checkbox"/> Augmentation to Containment Facility <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Slurry Makeup <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation to Containment Facility <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Slurry Makeup <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____	<input type="checkbox"/> Augmentation to Containment Facility <input type="checkbox"/> Recharge of Mine Cell <input type="checkbox"/> Materials Processing <input type="checkbox"/> Slurry Makeup <input type="checkbox"/> Cleaning/Maintenance <input type="checkbox"/> Mitigation of Dewatering Impacts <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Other: _____
<b>Alternative Water Supply Type</b>	<input type="checkbox"/> Wastewater treatment (WWT) <input type="checkbox"/> Captured storm water in catchment/basin * <input type="checkbox"/> Industrial waste water <input type="checkbox"/> Settling pond at a dewatering project <input type="checkbox"/> Industrial process byproduct <input type="checkbox"/> Brackish ground water <input type="checkbox"/> Brackish surface water	<input type="checkbox"/> Wastewater treatment (WWT) <input type="checkbox"/> Captured storm water in catchment/basin * <input type="checkbox"/> Industrial waste water <input type="checkbox"/> Settling pond at a dewatering project <input type="checkbox"/> Industrial process byproduct <input type="checkbox"/> Brackish ground water <input type="checkbox"/> Brackish surface water	<input type="checkbox"/> Wastewater treatment (WWT) <input type="checkbox"/> Captured storm water in catchment/basin * <input type="checkbox"/> Industrial waste water <input type="checkbox"/> Settling pond at a dewatering project <input type="checkbox"/> Industrial process byproduct <input type="checkbox"/> Brackish ground water <input type="checkbox"/> Brackish surface water
<b>Facility Type</b> <i>(Inflow and repump only)</i>	<b>Inflow (off-site supplier):</b> <input type="checkbox"/> WWT facility – pressurized pipe <input type="checkbox"/> WWT facility – unpressurized pipe <input type="checkbox"/> Other than WWT facility source <b>Repump:</b> <input type="checkbox"/> From a lined holding pond <input type="checkbox"/> From an unlined holding pond	<b>Inflow (off-site supplier):</b> <input type="checkbox"/> WWT facility – pressurized <input type="checkbox"/> WWT facility – not pressurized <input type="checkbox"/> Other than WWT facility source <b>Repump:</b> <input type="checkbox"/> Lined holding pond <input type="checkbox"/> Unlined holding pond	<b>Inflow (off-site supplier):</b> <input type="checkbox"/> WWT facility – pressurized <input type="checkbox"/> WWT facility – not pressurized <input type="checkbox"/> Other than WWT facility source <b>Repump:</b> <input type="checkbox"/> Lined holding pond <input type="checkbox"/> Unlined holding pond
<b>Mainline Diameter</b> <i>Inflow facilities: Outer pipe diameter delivering AWS Repump facilities: Outside diameter of withdrawal pipe.</i>	_____ inches	_____ inches	_____ inches
<b>Expected Annual Average Quantity**</b>	_____ gpd	_____ gpd	_____ gpd
<b>Expected Minimum Monthly Delivery</b> <i>Minimum quantity/month per contract or agreement.</i>	_____ gpd	_____ gpd	_____ gpd
<b>Number of Months Availability</b> <i>Number of months/year supply is likely be available.</i>			
<b>Expected Maximum Daily Quantity</b>	_____ gpd	_____ gpd	_____ gpd
<b>Date Available</b> <i>First month/year of service expected or month/year when existing service began.</i>	_____ (mm/yyyy)	_____ (mm/yyyy)	_____ (mm/yyyy)

\*\* Provide the calculations and documentation for the amount of storm water to be counted toward AWS use per catchment. Include documentation that the capture of this amount of stormwater runoff does not adversely impact the watershed, environment, existing legal users and off-site land use.

\*\* If anticipated quantities are for less than 12 months per year, prorate the annual average accordingly.

3. **Metered Use:** If an existing AWS facility is not metered, on an attachment explain how quantities delivered/created are measured.  
 Attached
4. **Stormwater:** If any part of the AWS claimed is stormwater captured for use on-site, provide the name and Florida Department of Business and Professional Regulation License number for the individual who calculated the stormwater quantities that are captured.  
 Not applicable

Print Name \_\_\_\_\_

FDBPR License No. \_\_\_\_\_

**PART VI. MINING OPERATIONS AND METHODS**

Describe the mining and dewatering plans for the expected duration of mining up to 10 years. If more than one type of material mined was checked on page 1, indicate the geologic formation for each dewatering withdrawal point.

**A. SITE PREPARATION/OVERBURDEN REMOVAL**

1. Is dewatering proposed in advance of mining?  Yes  No Skip to "B. MINING METHOD."
2. If "yes," indicate dewatering purpose (*check all that apply*):  Site preparation  Overburden removal
3. **Dewatering Well Information:** Provide information on dewatering wells in the tables below. Show the duration in number of months that the well will be required for its dewatering activity. Indicate the geologic formation (Ft. Thompson, Caloosahatchee, Tamiami, Hawthorn-Bone Valley, Hawthorn-Arcadia, Arcadia, Tampa, Nocatee, Suwannee LS, Ocala LS, Avon Park) that is to be dewatered or removed. If there are multiple mining phases, indicate the mine phase pertinent to the well. Indicate the proposed disposition of a well after dewatering (capped, plugged, removed). Reference each dewatering source to the map required in PART IV, Geologic and Hydrologic Evaluation, above. If a section of the table does not apply, denote with "N/A." Depths should be below land surface.

*Reference pertinent information to the map required in PART IV, Geologic and Hydrologic Evaluation, above.*

District ID No.	Owner ID No.		Owner ID No.		Owner ID No.	
	<input type="checkbox"/> Existing <input type="checkbox"/> Proposed		<input type="checkbox"/> Existing <input type="checkbox"/> Proposed		<input type="checkbox"/> Existing <input type="checkbox"/> Proposed	
Casing Diameter	inches		inches		inches	
Total Depth (ft. bls)						
Casing Depth (ft. bls)						
Pump Capacity	gpm		gpm		gpm	
Mainline Diameter	inches		inches		inches	
Currently Metered	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Meter Type ( <i>if currently metered</i> )	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter		<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter		<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter	
Meter Serial No. ( <i>if currently metered</i> )						
Annual Average Quantity	gpd		gpd		gpd	
Peak Month Quantity	gpd		gpd		gpd	
Maximum Daily Quantity	gpd		gpd		gpd	
Geologic Formation Dewatered						
Mine Phase						
Duration of Use	____ (mm/yy) – ____ (mm/yy)		____ (mm/yy) – ____ (mm/yy)		____ (mm/yy) – ____ (mm/yy)	
Future Disposition	<input type="checkbox"/> Cap <input type="checkbox"/> Removed <input type="checkbox"/> Plug		<input type="checkbox"/> Cap <input type="checkbox"/> Removed <input type="checkbox"/> Plug		<input type="checkbox"/> Cap <input type="checkbox"/> Removed <input type="checkbox"/> Plug	

4. **Metered Use:** If an existing dewatering withdrawal point is not metered, or a proposed withdrawal point is not to be metered, attach an explanation of how dewatering quantities are measured.  
 Attached

**B. MINING METHOD** (Choose at least one mining method)

1. **Open Pit Mining With Dewatering:** If the mining method is open pit mining with dewatering, answer questions below.  
 Not applicable. Skip to "Number 2. Dredge/Wet Mining".

a. Provide information on the surface water withdrawal points (pumps and withdrawal pipe) for each mine pit dewatering site in the table below. Indicate the material mined and geologic formation (Ft. Thompson, Caloosahatchee, Tamiami, Hawthorn-Bone Valley, Hawthorn-Arcadia, Arcadia, Tampa, Nocatee, Suwannee LS, Ocala LS, Avon Park) that is to be dewatered for mining. If there will be multiple dewatering withdrawal points operational at one time, provide information for each of them separately. If any surface water withdrawal point is to be moved to new dewatering locations as needed, only input the information once. The mining plan will show its subsequent locations

	Owner ID No. B-1A	Owner ID No. B-1B	Owner ID No.
District ID No. (if existing)	89	89	
Status	<input checked="" type="checkbox"/> Existing <input type="checkbox"/> Standby <input type="checkbox"/> Proposed <input type="checkbox"/> Dismantled	<input type="checkbox"/> Existing <input checked="" type="checkbox"/> Standby <input type="checkbox"/> Proposed <input type="checkbox"/> Dismantled	<input type="checkbox"/> Existing <input type="checkbox"/> Standby <input type="checkbox"/> Proposed <input type="checkbox"/> Dismantled
Intake Diameter (outer)	24.0 inches	18.0 inches	inches
Construction Date (mm/yyyy)	10/2007	10/2007	
Pump Capacity	50 gpm	150 gpm	gpm
Mine Cell Reference to Map			
Duration of Dewatering	From NA (mm/yy) To NA (mm/yy)	From NA (mm/yy) To NA (mm/yy)	From (mm/yy) To (mm/yy)
Material Mined (Limestone, Sand/Gravel, Shell, Peat, etc.)	Limestone	Limestone	
Geologic Formation Dewatered (Indicate all that apply. See list above)	Ocala Limestone	Ocala Limestone	
Currently Metered	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Meter Type (if currently metered)	<input checked="" type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter	<input checked="" type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter	<input type="checkbox"/> Analog totalizing flow meter <input type="checkbox"/> Digital totalizing flow meter
Meter Serial No. (if currently metered)	89A	89B	
Mainline Outside Diameter	24.0 inches	18.0 inches	inches
Annual Average Quantity	103,500 gpd	103,500 gpd	gpd
Peak Month Quantity	155,000 gpd	NA gpd	gpd
Maximum Daily Quantity (If any)	NA gpd	NA gpd	gpd

- b. If an existing dewatering withdrawal point is not metered, or a proposed withdrawal point is not to be metered, attach an explanation of how dewatering quantities are measured.  
 Attached

- c. Attach a detailed dewatering plan for the mining activities. The plan must include a description of the dewatering quantities anticipated through time on a monthly, annual, or other appropriate basis, for each mine cell proposed to be dewatered within the permit duration. If mining activity is to occur in phases, reference each phase with a tentative "begin" date. Reference each withdrawal point for dewatering using the map in PART IV, Geologic and Hydrologic Evaluation. For each dewatered cell, indicate the maximum dewatered level and the expected length of time that the pit will be held at all levels of dewatering.
  - Attached

**2. Dredge/Wet Mining:** If the mining method is dredge/wet mining, answer questions below.

Not Applicable. Skip to "Number 3. Dry Mining."

- a. Provide information on any wells or surface water withdrawal points that will be used to initially charge the mine pit or will be used to keep the mine pit charged with water to float the dredge. If more than one pit is to be created, indicate the order of use in "Mine Phase." Indicate the proposed disposition of a well after dewatering (cap or plug).

District ID No.	Owner ID No.	Duration of Use (mm/yy to mm/yy)	Mine Phase	Future Disposition of Charge Withdrawal
				<input type="checkbox"/> Cap <input type="checkbox"/> Plug <input type="checkbox"/> Removed <input type="checkbox"/> Dismantle
				<input type="checkbox"/> Cap <input type="checkbox"/> Plug <input type="checkbox"/> Removed <input type="checkbox"/> Dismantle
				<input type="checkbox"/> Cap <input type="checkbox"/> Plug <input type="checkbox"/> Removed <input type="checkbox"/> Dismantle
				<input type="checkbox"/> Cap <input type="checkbox"/> Plug <input type="checkbox"/> Removed <input type="checkbox"/> Dismantle

- b. Attach a detailed dredge/wet mining plan describing the process for each mine cell. The plan must include, at a minimum, a description of how quantities are derived to fill a dredge pit and the estimated duration of the initial charging of the pit, if required. If the mining operation is to occur in phases, please give tentative dates for each phase.

Attached

*Note: Applicant is required to provide reasonable assurance that the water used to charge the pit does not impact any off-site land use, existing legal withdrawal of water, or environmental features. See PART X, Impact Assessment. Reference pertinent information to the map required in PART IV, Geologic and Hydrologic Evaluation.*

**3. Dry Mining:** If dry mining is proposed for which water is required, attach a dry mining plan describing in detail the water needs associated with the process. Reference pertinent information to the map required in PART IV, Geologic and Hydrologic Evaluation.

Attached

Not applicable

**4. Combination of the three mining processes listed above:** If multiple mining methods are to be utilized, attach a detailed mining plan that addresses each process for each mine cell as appropriate as described above.

Attached

Not applicable

**PART VII. WATER ROUTING**

Describe how water from dewatering activities or from ground or surface water withdrawal points is to be used and transferred on site.

Not Applicable. There is no routing of water onsite. **Skip to PART VIII ADDITIONAL WATER DEMAND**

**A. WATER ROUTING DIAGRAM**

Submit a plan-view diagram showing how water will be routed among the mine cells, recirculation ponds, settling ponds, hydraulic recharge/intercept ditches, recharge wells, dewatering wells, off-site discharge sites, etc., as well as to and from any on-site processing facilities. Include any water table drainage systems, existing or proposed. Major components shown on the diagram must be referenced to the map locations required in PART XV, Maps, or the water routing diagram can be drawn onto the ortho-photographic map required.

Attached

**B. OFF-SITE DISCHARGE POINTS**

Complete the table below with information on all permitted off-site discharge points. Reference the discharge point number to the map required in PART IV, Geologic and Hydrologic Evaluation, above.

Not applicable; there will be no off-site discharge of water.

Discharge Point No.	NPDES Permit No.	Daily Volume Discharge (gpd)	Source of Discharge	Receiving Water Body
001	D-001		EXCESS RAINFALL	JUMPER CREEK
		Discharge to Jumper Creek only during periods when regional hydro-geologic conditions exceed the Outfall D-001 weir elevation and/or storm events greater than a 25year-24hour storm. The discharge consists of groundwater pumped from the active mine pit, commingled with stormwater from rainfall runoff.		

**C. HYDRAULIC RECHARGE/INTERCEPT DITCHES**

Not applicable; no hydraulic recharge/intercept ditches are proposed.

Provide detailed information describing the construction details of each hydraulic recharge/intercept ditch to prevent adverse impacts associated with dewatering as shown on the map required in PART IV, Geologic and Hydrologic Evaluation, above. Include the length, width, and depth of the recharge/intercept ditch, the geology of the matrix on each side and below the ditch, the source of water, and how the water level in each hydraulic recharge/intercept ditch will be maintained and monitored. The operation information must include monitoring and maintenance information to ensure the effectiveness of the hydraulic barrier.

Attached

**D. RECIRCULATION AND SETTLING PONDS**

A recirculation pond is a settling pond that provides a source of water (Alternative Water Supply), and so it has or will have a surface water withdrawal point. If the water in a settling pond is not reused, it will not have a surface water withdrawal point, but it may have a discharge point.

Provide information of all existing and proposed recirculation and settling ponds in the table on the next page. Quantities required are annual averages in gallons per day. Reference each pond identification number to the map required in Maps Section, PART XIV, and complete information for that pond in the column below the identification number. Provide the date for the initial flow to the pond and the date at which the pond will be abandoned with respect to mining operations. Recirculation ponds, as a source of Alternative Water Supply (AWS), will have surface water withdrawal points that require an Owner ID Number. (Note, these should have been listed in the Alternative Water Supply section.) Either pond type may have a discharge point.

Not applicable; there are no existing or proposed recirculation or settling ponds. **Skip to PART VIII.**

Recirculation and Settling Pond Table

	Pond Identification (reference to map)			
Existing or Proposed Pond	<input type="checkbox"/> Existing <input type="checkbox"/> Proposed			
Owner ID Number	<input type="checkbox"/> Existing <input type="checkbox"/> Proposed			
District ID Number (if existing)				
Pond Type	<input type="checkbox"/> Recirculation <input type="checkbox"/> Settling			
Pond Acreage				
Depth of Pond (below land surface)	feet	feet	feet	feet
Input Quantity	gpd	gpd	gpd	gpd
Input Source*	<input type="checkbox"/> Treatment Facility <input type="checkbox"/> Mine Pit			
Estimated Infiltration Rate from water table**	gpd	gpd	gpd	gpd
Estimated Evaporative Losses	gpd	gpd	gpd	gpd
Quantity Withdrawn for Reuse (recirculation ponds only)	gpd	gpd	gpd	gpd
Quantities Discharged	gpd	gpd	gpd	gpd
Input Initiation Date (mm/yy)				
Termination Date (mm/yy)				

\* Where does the water that flows into the pond originate (mine pit, refining facilities, etc.)

\*\* The infiltration rate is the rate at which ground water flows into the pond.

**PART VIII. ADDITIONAL WATER DEMAND**

Compile all documentation of quantities, water balances and mining and dewatering water demand information into one document and attach it to this application form. Quantities and withdrawal points used for some of this information has been asked earlier in the application and will not be repeated here. Additional water demand not requested earlier is addressed here.

**A. PRODUCT INFORMATION**

1. Provide the estimated U.S. tons of product to be removed from the site each year. +/-1,440,000 TONS
2. Provide the percentage by weight of the water entrained with the product leaving the site: 12 %
3. Provide the quantities of water lost from the site due to product entrainment:  
Annual Average 206,946 gpd Peak Month (gpd) 309,960 gpd
4. Attach the appropriate references and calculations with conversion to gallons per day.  
 Included in attachment

**B. MINING ACTIVITIES WATER DEMAND**

Provide both a water balance table and water balance diagram for existing and proposed annual average and peak month water demands. The table and diagram must show all water sources (ground water from wells, ground water from water table dewatering or drainage, surface water, rainfall, recycled water, etc.), the amount of water entering and leaving each step in the process (uses, slurry creation, etc.), and all water losses (evaporation, product moisture, product entrainment, waste material water entrainment, steam losses, other processing water losses, sorting and grading, off-site discharge, recycling, etc.). Major water balance components may be constructed separately; however, links between components must be shown. Provide the percentage of unaccounted water losses for existing operations (total system throughout minus all accounted and in-plant uses). Show in the water balance where the unaccounted losses may be occurring. Include appropriate calculations to support the water balance tables or diagrams. (Quantities and withdrawal point identification for those quantities were made earlier in the application.)

Tables and diagrams included in attachment

**C. PLANT/FACILITIES WATER DEMAND**

Not applicable. There are no plants or facilities that need water associated with this project.

Provide both water balance tables and water balance diagrams on annual average and peak month processing/refining/water demands for each existing and proposed plant/facility. All quantities must be in units of gallons per day, and the total of all sources must equal the total of all losses. Include appropriate calculations to support the water balance tables or diagrams. (Quantities and withdrawal point identification for those quantities were made earlier in the application.)

Tables and diagrams included in attachment

**D. RECLAMATION WATER DEMAND**

Not applicable. Reclamation will not take place within the permit term or it will not require additional water demand.

If reclamation is to begin during the term of this permit, irrigation needs for plant and landscape establishment will require a separate application (for Recreation/Aesthetic water use). For non-irrigation water needs, describe and quantify those associated with the proposed reclamation activities. Include appropriate calculations on a spreadsheet or other electronic format to support the reclamation water demand.

District ID No.	Owner ID No.	Annual Average (gpd)	Peak Month (gpd)
Subtotal:			

Calculations included in attachment

**E. CONSTRUCTION ASSOCIATED WITH MINING OR DEWATERING**

Not applicable. Water is not needed for construction.

If water is needed for construction associated with mining or dewatering, complete the table below:

District ID No.	Owner ID No.	Annual Average (gpd)	Peak Month (gpd)
Subtotal:			

Provide documentation of the annual average and peak month water demand.

Documentation included in attachment

**F. FIRE FLOW (SUPPRESSION AND TESTING)**

Not applicable. Fire protection is provided by a public supply utility.

If fire protection is provided from an on-site water source, provide the quantities needed including quantities required to test and maintain the system.

*Peak month* = is for a single fire in a single month.

District ID No.	User ID No.	Annual Average (gpd)	Peak Month (gpd)
<b>Subtotal:</b>			

Documentation included in attachment

**G. LAWN/LANDSCAPE IRRIGATION**

Not applicable. Irrigation water is not provided from withdrawal facilities on this property.

If water is used to irrigate 5 acres or less of lawn and landscape around the office or facilities, complete the table below. If more acreage is irrigated, you must apply for a separate Recreation or Aesthetic Water Use Permit.

District ID No.	User ID No.	Acres	Irrigation Method	Was AGMOD Used	Annual Average (gpd)	Peak Month (gpd)
				<input type="checkbox"/> Yes <input type="checkbox"/> No		
				<input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>Subtotal:</b>						

AGMOD printout or other calculation of quantities included in attachment.

**H. POTABLE/SANITARY REQUIREMENTS**

Not applicable; potable/sanitary requirements are provided by a public supply utility.

If water is provided for the potable/sanitary needs of employees, complete the table below.

Shift Number	District ID No.	Owner ID No.	Employees and Visitors/Shift	Workdays/Week	Annual Average (gpd)	Peak Month (gpd)
1	3 & 4	3 & 4	48	7	2,400	3,600
2						
3						
<b>Subtotal:</b>					2,400	3,600

**I. MISCELLANEOUS USE**

If water is needed for washing and maintenance of equipment and facilities, air conditioning, cooling, etc., complete the table below. (Washing of mined product is part of the material processing water needs).

Not applicable. No other water uses are requested

District ID No.	Owner ID No.	Annual Average (gpd)	Peak Month (gpd)
5 & 32	5 & 32	5200	10400
<b>Subtotal:</b>		5200	10400

**J. AUGMENTATION FOR MITIGATION**

Not applicable. Augmentation for mitigation does not occur and is not planned.

If water quantities are required to provide mitigation of impacts to wetlands, off-site land use, lakes, streams, etc., provide the information in the table below. The water source could be an aquifer, settling pond, etc.

District ID No.	Owner ID No.	Water Source	Annual Average (gpd)	Peak Month (gpd)
33	WP-33	South Quarry	25,000	50,000
<b>Subtotal:</b>				

<b>TOTAL OTHER MINING AND DEWATERING WATER DEMAND:</b>	<b>Annual Average (gpd)</b>	<b>Peak Month (gpd)</b>
	32,600	64,000

**IX. MONITOR SITES**

If there are monitor sites, including any withdrawal points that are used also for monitoring purposes, complete the next table using the codes from the list below.

If there are neither existing nor proposed monitor sites, check here  and skip to PART X.

**MONITOR TYPES**

Code	Description	Remarks
DM	Discharge meter	Measures discharge through a pipe
EM	Effluent meter	Discharge from a treatment plant or meter at a reuse customer's site
EP	Evaporation pan	Evaporation usually associated with a surface water body
ES	Environmental monitor site	Usually a wetland, lake, riverine environment, or estuary
F	Flume	Narrows flow and measures height in flume for discharge rate
FM	Flow meter	Measures flow in stream or river or site discharge, not from a withdrawal point.
MW	Monitor well	Monitors ground water
PM	Piezometer	Water table monitor
RG	Rain gauge	Rainfall
SG	Staff gauge	Flow rate or surface water body level indicator
SS	Sample site	Sample site at surface (land, lake, stream, spring, estuary, etc.)
TM	Thermometer	Temperature measurement
WR	Weir	Flow rate or water level indicator

**MONITOR USES**

Code	Description	Remarks
AL	Aquifer levels	Water levels in wells
DF	Discharge flow	From a site or facility
EA	Environmental monitoring	Water inflow to an augmented environmental site
HB	Hydraulic Barrier	Limit function to piezometer and staff gauge
LL	Surface water body water level	Lake, pond, reservoir, riverine impoundment
MP	Mine pit water levels	Dewatering level in feet, NGVD or NAVD
RF	Rainfall	Local precipitation in inches
S	Salinity	Salinity of a surface water body
SA	Salt water wedge	Tidal function in an estuary
SF	Stream flow	Canal, stream, river
SI	Aquifer Saline Water Interface	Monitor well placed at the saline water interface in an aquifer
SW	Aquifer Saline Water Intrusion	Monitor well inland of saline water interface

**MONITOR USES (continued)**

Code	Description	Remarks
TA	Temperature of air	<i>As stated</i>
TB	Water turbidity	<i>As stated</i>
TW	Temperature of Water	<i>Temperature of ground or surface water</i>
U	Contamination Plume	<i>Monitors location and concentration of contaminant plume in aquifer</i>
WF	Wetland function	<i>Measurement of the functional health of a wetland</i>
WL	Wetland water level	<i>Surface water level in a wetland</i>
WQ	Water quality	<i>Surface or ground water quality samples</i>
RE	Retention pond	<i>Levels in retention ponds, usually associated with augmentation</i>

	Owner ID No.				
District ID No.					
Owner <i>(if other than applicant)</i>					
Monitor Type					
Monitor Use					
Frequency*					

\* Hourly, daily, weekly, monthly, quarterly, semi-annually, annually, bi-annually (every other year), other (specify).

**PART X. IMPACT ASSESSMENTS**

All applicants for a water use permit must provide reasonable assurance that their water use will not cause adverse impacts to existing legal users, to the water resources or to offsite land use. The reasonable assurance is provided via the Impact Assessment.

- Not applicable. The impact analysis that was done for the previous revision of this permit suffices as a complete and current assessment of impacts to existing legal users, to the water resources or to offsite land use caused by the activity described in this application.

**IMPACT ASSESSMENT GUIDELINES**

Submit analyses and detailed documentation of the impacts predicted by the proposed mining and/or dewatering activities, including water withdrawals for any uses listed, water losses due to water entrainment with product, change in storage resulting from mining or dredge pit creation, and increased evaporation losses with respect to existing legal water users, off-site land uses, and environmental features (such as wetlands and other surface water features, whether natural or man-made). If the mining operation is dredge/wet mining, include an analysis of the impacts of pumping ground water to initially charge the pit. If Alternative Water Supplies (AWS) provide water that would otherwise be withdrawn from the resource, analyze the impacts assuming lack of AWS. The applicant is required to provide reasonable assurance that the mining or dewatering activity does not adversely impact any off-site land uses, existing legal withdrawals of water or environmental features.

The analysis must portray impacts caused by maximum water use and dewatering depths of each mine cell without mitigation efforts (such as hydraulic recharge ditches or recharge wells) as well as with mitigation efforts. Analyses and documentation provided to support this application must be signed and sealed by a qualified professional as specified in PART XVI, Professional Certification. Label and reference all elevations, water levels, and depths to either National Geodetic Vertical Datum 1929 or North American Vertical Datum 1988 as appropriate.

**A. GROUNDWATER FLOW MODEL**

- Not applicable. A groundwater flow model was not utilized in impact analyses. **Skip to Section B.**

If a groundwater flow model is used to predict drawdown impacts, the model must be run to simulate the maximum dewatered level to quasi-steady state or for the duration of dewatering each cell, whichever is less. If the dewatering will occur in stages, multiple models may be run to simulate the progression of dewatering through time. If mitigation efforts are proposed, a second model run must portray the effect of mitigation efforts to preserve

the water table. Models provided to the District may utilize the MODFLOW 2000 (or current) groundwater flow model code developed by the United States Geological Survey (Harbaugh, A.W., Banta, E.R., Hill, M.C., and McDonald, M.G., 2000) or a combination of integration with an accepted surface water flow model and MODFLOW groundwater flow model. Any models to be provided in support of a WUP application must be fully adaptable and functional for use with Ground Water Vistas software. If there is intent to use the District's calibrated model, it is recommended that the user schedule a pre-application meeting with the District to go over modeling procedures. All inputs and outputs to all packages and components of the models must be provided, and all parameters chosen must be documented and supported. Provide an overlay on the map required in PART XIV, Maps, indicating predicted water table elevations resulting from dewatering *without* mitigation at appropriate contour intervals to clearly delineate the extent of dewatering drawdown. If mitigation is proposed, provide an additional overlay demonstrating the modeled effect of the proposed mitigation efforts. The model files must be submitted in electronic format and in hard copy.

Attached

**B. OTHER DRAWDOWN ASSESSMENT METHODS**

Not applicable. This method was not utilized in an impact analyses.

If a drawdown impact assessment other than a groundwater flow model is submitted, describe the methodology, document that it is appropriate for the use intended, and provide input and output information and/or calculations used within the methodology, along with the results. Demonstrate that the calculations and the methodology used are supported by the hydro-geological regime. The drawdown assessment must clearly delineate drawdown impacts caused by maximum dewatering depths of each mine cell without mitigation efforts, in addition to with mitigation efforts such as water table recharge ditches. The drawdown assessment must be submitted in electronic format and in hard copy.

Attached

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## PART XI. ENVIRONMENTAL MANAGEMENT PLAN

If the analysis in PART X, Impact Assessments, above, identifies potential impacts to wetlands, lakes, springs, streams, estuaries, fish and wildlife, or other environmental features, then the applicant must submit an Environmental Management Plan (EMP). The EMP must describe the pre-mining or pre-dewatering conditions within the systems to be protected, describe protection measures that will be used to prevent adverse impacts, monitor the effectiveness of the protection measures, set thresholds for mitigation actions, and describe the mitigation actions to be taken if impacts occur. All elevations, levels and depths must be relative to NGVD 1929 or to NAVD 1988 as appropriate. The datum used must be clearly identified in the report and labeled on diagrams and maps.

Does the impact analysis, conducted prior to the addition of any protection measures, predict any potential impacts to wetlands or other environmental features?  Yes  No Skip to PART XII.

If "yes," submit the following in an EMP:

**A. BASELINE ASSESSMENT**

The baseline assessment must be conducted for a sufficient duration and frequency prior to the initiation of mining, dewatering, or groundwater withdrawals to present a thorough characterization of the normal hydrology of those systems. The baseline assessment must consist of:

1. Identification and initial assessment of current hydrologic and vegetative conditions of all on-site environmental features that are not permitted to be impacted and are predicted to be hydrologically impacted if protection measures fail. Furthermore, all off-site environmental features that are predicted to be hydrologically impacted if protection measures fail must also be identified and have separate assessments documenting their current hydrologic and vegetative conditions. The assessments must be both quantitative and qualitative (using photographs and description).
2. Identification and initial assessment of a variety of non-impacted reference environmental features with which to compare each potentially impacted environmental feature during mining or dewatering activities.
3. Identification of pre-mining and pre-dewatering water table levels and wetland water levels including normal hydro-period fluctuations.

**B. PROTECTION MEASURES**

All predicted adverse impacts to environmental features must be avoided. The EMP must fully describe the protection measures that are designed to prevent predicted adverse impacts to environmental features. The on-site and off-site environmental features that are to be preserved and the associated protection measure must be identified and an explanation given for each concerning how and why the protection measure(s) will work as designed. Each protection measure must be depicted on the map required in PART IV, Geologic and Hydrologic Evaluation, above. The permittee must put all protection measures into effect prior to mining/dewatering or prior to pumpage from wells, if applicable.

**C. MONITORING PLAN**

The monitoring plan must describe in detail the baseline assessment, as well as the monitoring location, timing, and reporting periods for the long-term assessment. A long-term monitoring plan including the sampling protocol, must be designed to provide surface water levels, surficial aquifer water levels, and potentiometric surface for both the protected and reference environmental features. The monitoring plan must also include a wetland assessment protocol sufficient to provide long-term information on the wetland plant community of each potentially impacted wetland or surface water.

**D. MITIGATION THRESHOLDS**

The EMP must establish a hydrologic impact detection protocol to provide metrics for comparing the hydrology of potentially impacted wetlands and streams to the hydrology of reference environmental features. It must describe site-specific thresholds or triggers that will alert the permittee and the District that the protection measure(s) appear to be insufficient, and will initiate implementation of mitigation actions.

**E. MITIGATION ACTIONS**

The EMP must describe sequential and progressive actions that will be taken to quickly correct unexpected hydrologic impacts to preserved environmental features. The description of the actions to be taken in the mitigation plan must detail what these activities are, what they are meant to accomplish, and how they are to be monitored for success. The EMP must also contain a statement that if water levels in environmental features cannot be maintained while mining and/or dewatering actions are underway, then the permittee shall immediately cease mining and/or dewatering.

Attached

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**PART XII. SOUTHERN WATER USE CAUTION AREA**

If at least one withdrawal point is located in the Southern Water Use Caution Area (SWUCA), the entire permit is considered to be in the SWUCA. If this is the case it is required that the SWUCA Supplemental Form be included with this application. Within the SWUCA supplemental form, the applicant will be directed to add other supplemental forms if they are required. NA

Attached

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**PART XIII. WATER CONSERVATION**

Submit a water conservation plan that insures efficiency of use and provides for increasing efficiency of use by implementing environmentally, technically and economically feasible water conservation measures. The plan shall include water conservation practices and utilization of water conserving technologies applicable to all components of demand and loss including recycling, reuse, and utilization of water-efficient irrigation practices on drought-tolerant landscaping. An implementation schedule shall be included for each water conservation measure anticipated, and progress reports shall be required based upon the implementation schedule.

In addition to the requirements for new applicants, above, the water conservation plan for renewal or modification of a mining or dewatering water use permit shall describe and quantify where and when water savings have been achieved by existing practices and identify where, when and how much water savings can be reasonably achieved by incorporating proposed water conservation measures. An implementation schedule shall be included for each proposed conservation measure, and progress reports shall be required based upon the implementation schedule.

Attached

**PART XIV. MAPS****A. MINE PROJECT SITE MAPS**

Submit a recent digital ortho-photographic map or maps of the entire project that delineates or plots the features listed below. The ortho-photographic maps on the District's geographic information system (GIS) may be utilized. If the District's ortho-photographic maps are not used, then the minimum scale for the hardcopy map submitted must be 1 inch = 2,000 feet. Road names must be clearly shown. Label all items in the list below.

1. Applicant property boundary.
2. If this application includes non-contiguous owned or leased parcels, or if the parcel(s) to be serviced are a distance from the withdrawal point locations, provide separate large-scale maps (those that enlarge the area) of each parcel in addition to a smaller-scale (those that show a larger area) map that includes all parcels.
3. Ponds, pits, lakes, streams, canals, rivers or any surface water body that is to be used as a water source. If a surface water source is to be constructed, outline its proposed footprint on the map.
4. Interconnected withdrawal points such as augmentation-repump systems.
5. Label each surface water withdrawal point location with the District ID No. or the Owner ID No. for identification.
6. Indicate the boundaries of each mine pit and mine cell, referenced to the cross sections required in PART IV, Geologic and Hydrologic Evaluation. If the mining/dewatering will be done in phases, indicate the relative progression of mine pit areas to be dewatered/mined for the permit duration term. Label them numerically or by anticipated month/year.
7. Identify the location of each cross section and label them for reference to the cross sections required in PART IV, Geologic and Hydrologic Evaluation.
8. Identify the existing and proposed dewatering withdrawal location for each mine cell referenced to the table required in PART VI, Mining Operations and Methods.
9. Identify existing or proposed pumps used to route water on-site and label them to reference information required in the water routing diagram.
10. Indicate any existing or proposed surface drainage ditches intended to lower the water table.
11. Identify and label each existing and proposed ground water well with the District ID No. (if one exists), Owner ID No. and its proposed use, using the symbols delineated below:
  - a. Recharge well(s) used to mitigate environmental and water resource related drawdown impacts as **RC**
  - b. Dewatering well(s) as **C**
  - c. Augmentation well(s) for floating a dredge as **AU**
  - d. Standby well(s) as **SB**
  - e. Capped well(s) as **CA**
  - f. Plugged well(s) as **PL**
  - g. Existing wells to be plugged and abandoned as mining progresses as **TP**
  - h. Charge wells to fill a mine pit with water to float a dredge as **CH**
12. Recirculation and/or Settling Ponds – Indicate existing and proposed recirculation and/or settling ponds, labeled for reference to PART VII, Water Routing.
13. Hydraulic recharge ditches – Identify the location of existing and proposed hydraulic recharge ditches, labeled to reference to the cross sections required in PART IV, Geologic and Hydrologic Evaluation.
14. Off-site discharge points – Indicated locations of existing and proposed off-site discharge points, including dredge-line discharges and settling pond discharges, labeled to reference to the information required in PART VII, Water Routing.
15. On-site Environmental – Delineate all on-site wetlands and surface waters and indicate the type using the symbols delineated below:
  - a. Environmental features to be preserved under an ERP or DRI permit as **ERP-P**
  - b. Environmental features to be mined as **M**
  - c. Environmental features to be reclaimed under a DEP Reclamation Plan as **DEP-R**
  - d. Environmental features to be created under an ERP mitigation plan as **ERP-C**



**PART XVII. APPLICANT/OWNER CERTIFICATION**

All owners of the property described in this application are included as co-applicants of this permit. Please attach their signatures to a document that attests that they are aware of this application and agree to its content, or that they have empowered the signer below with authority to act on this application on their behalf.

- Attached       Not applicable

**BUSINESS ENTITY AS APPLICANTS**

If the permit applicant is a business entity, indicate the type of business entity below and provide the name and title of the person signing on behalf of the business entity. Attach documentation of the status of the business entity to legally operate in the State of Florida, such as a copy of the last corporate annual report submitted to the Florida Department of State or a Certificate of Status issued by Florida Department of State.

- Florida Corporation                       Florida General Partnership                       Florida Limited Liability Company  
 Florida Limited Partnership               Foreign Corporation/Partnership               Trust  
 Other: \_\_\_\_\_

I hereby certify that the information contained herein is true and accurate and that I have legal authority to undertake the activities described herein and execute this application.

James P. Morris  
 Applicant signature/Consultant or Contact signature\*

May 20, 2010  
 Date

JAMES P. MORRIS  
 Name and title if signing as business entity applicant\*

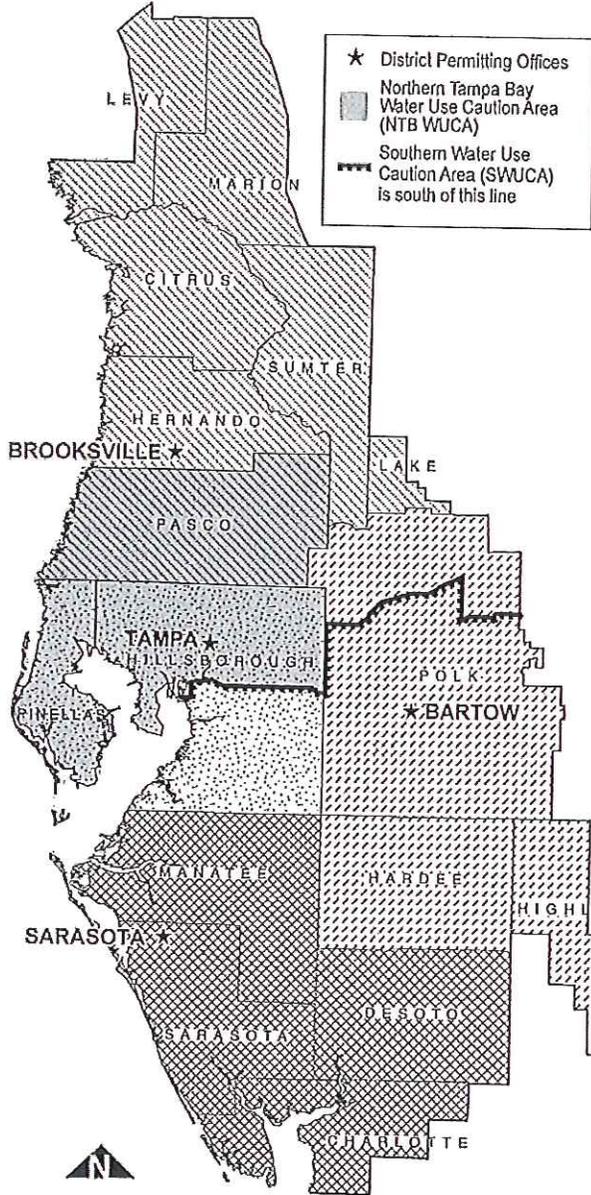
\* If this application is being submitted by a consultant or contact, a signed document from the landowner(s) must be attached giving authority to sign and submit this application.



## **Southwest Florida Water Management District**

Applicants for water use and environmental resource permits may submit their applications to any District Permitting Office; however, it is recommended to submit them to the Permitting Office within the Service Region where their property is located. All activities concerning these permits will be conducted at these Permitting Offices. Applications for well construction permits may also be submitted to any Permitting Office; however, applications for well construction permits in Marion, Sarasota and Manatee Counties are evaluated and issued locally by county agencies.

### Resource Regulation Service Regions



### Resource Regulation Permitting Offices

**Brooksville Regulation Department**  
*Citrus, Hernando, Lake, Levy, Marion, Pasco, Sumter counties.*  
 2379 Broad Street  
 Brooksville, FL 34604-6899  
 (352) 796-7211 or 1-800-423-1476 (FL only)  
 Fax: (352) 540-6027; Suncom: 628-4150

**Tampa Regulation Department**  
*Hillsborough, Pinellas counties.*  
 7601 U.S. Hwy. 301  
 Tampa, FL 33637-6759  
 (813) 985-7481 or 1-800-836-0797 (FL only)  
 Fax: (813) 987-6747; Suncom: 587-2070

**Bartow Regulation Department**  
*Hardee, Highland, Polk counties.*  
 170 Century Boulevard  
 Bartow, FL 33830-7700  
 (863) 534-1448 or 1-800-492-7862 (FL only)  
 Fax: (863) 534-7058; Suncom: 572-6200

**Sarasota Regulation Department**  
*Charlotte, DeSoto, Manatee, Sarasota counties.*  
 6750 Fruitville Road  
 Sarasota, FL 34240-9711  
 (941) 377-3722 or 1-800-320-3503 (FL only)  
 Fax: (941) 373-7660; Suncom: 531-6900

**TDD: 1-800-231-6103 (FL only) for hearing assistance for all locations.**

*The Southwest Florida Water Management District (District) does not discriminate on the basis of disability. This nondiscrimination policy involves every aspect of the District's functions, including access to and participation in the District's programs and activities. Anyone requiring reasonable accommodation as provided for in the Americans with Disabilities Act should contact the District's Human Resources Director, 2379 Broad Street, Brooksville, Florida 34604-6899; telephone (352) 796-7211, ext. 4702 or 1-800-423-1476 (FL only), ext. 4702; TDD (FL only) 1-800-231-6103; or email to [ADACoordinator@swfwmd.state.fl.us](mailto:ADACoordinator@swfwmd.state.fl.us).*

**LETTER OF AUTHORIZATION**

May 12, 2009

TO WHOM IT MAY CONCERN:

This letter is authorization for James Morris (an employee of Cemex -Florida Region) as my agent, to sign permit applications on behalf of CEMEX Construction Materials Florida, LLC, including those to construct, maintain or operate pollution sources belonging to CEMEX Construction Materials Florida, LLC.

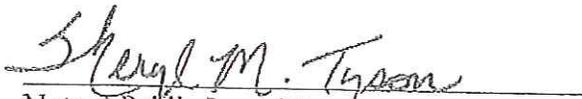
Sincerely,



Peter Lyons - Vice President  
CEMEX Construction Materials Florida, LLC

STATE OF FLORIDA  
COUNTY OF PALM BEACH

Subscribed and sworn to before me this 13<sup>th</sup> day of May, 2009 by Peter Lyons, personally known to me to be Vice President of CEMEX Construction Materials Florida, LLC.

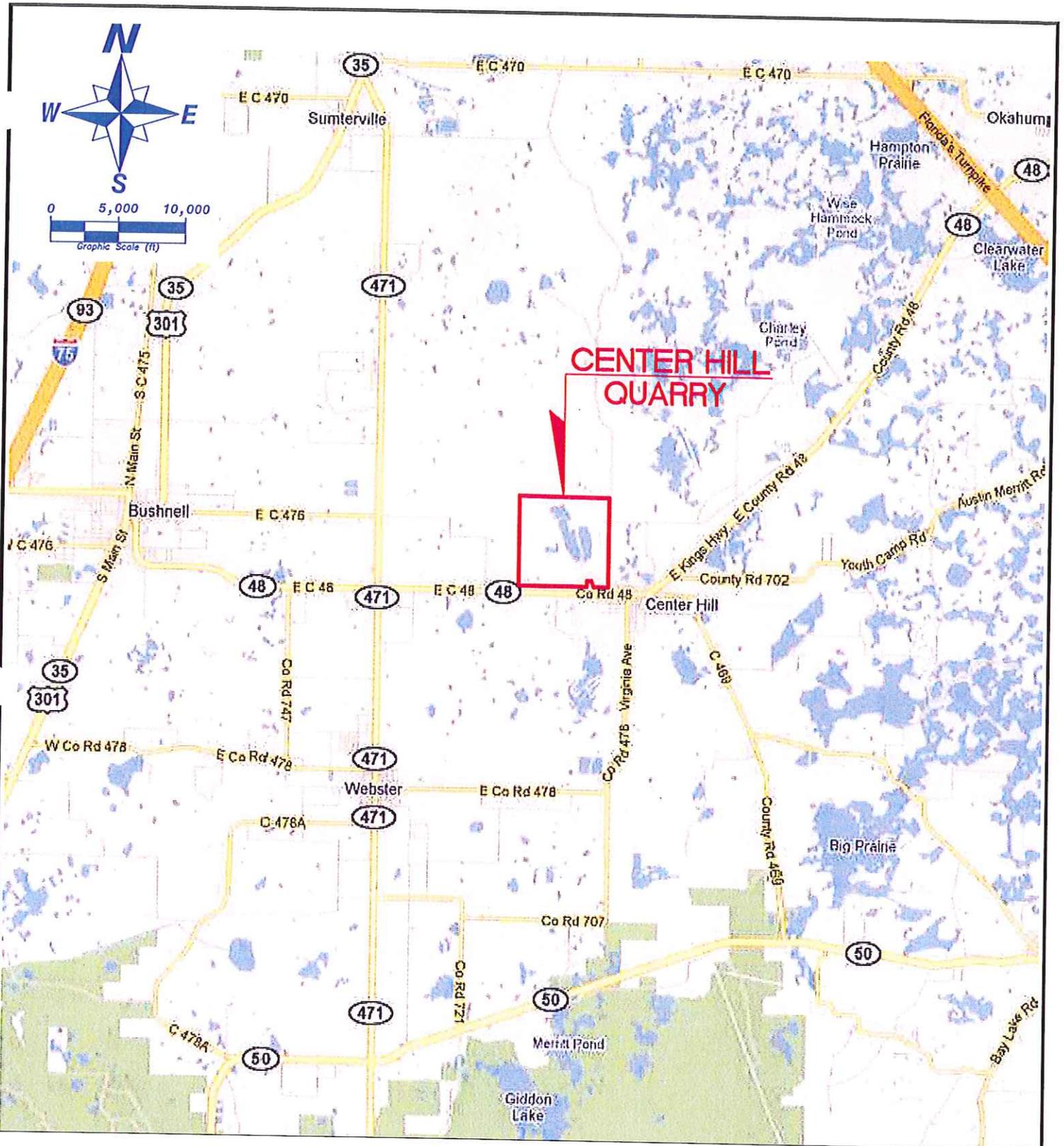
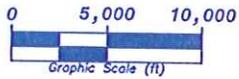


Notary Public In and For  
Said County and State

STAMP/SEAL:



## FIGURES



262AC CENTER HILL MINE.DWG MAY 2010. OPERATING PLAN WITH PROPOSED MODIFICATIONS.DWG

C:\CIVIL 3D PROJ\

**Cemex Construction Materials Florida, LLC.**

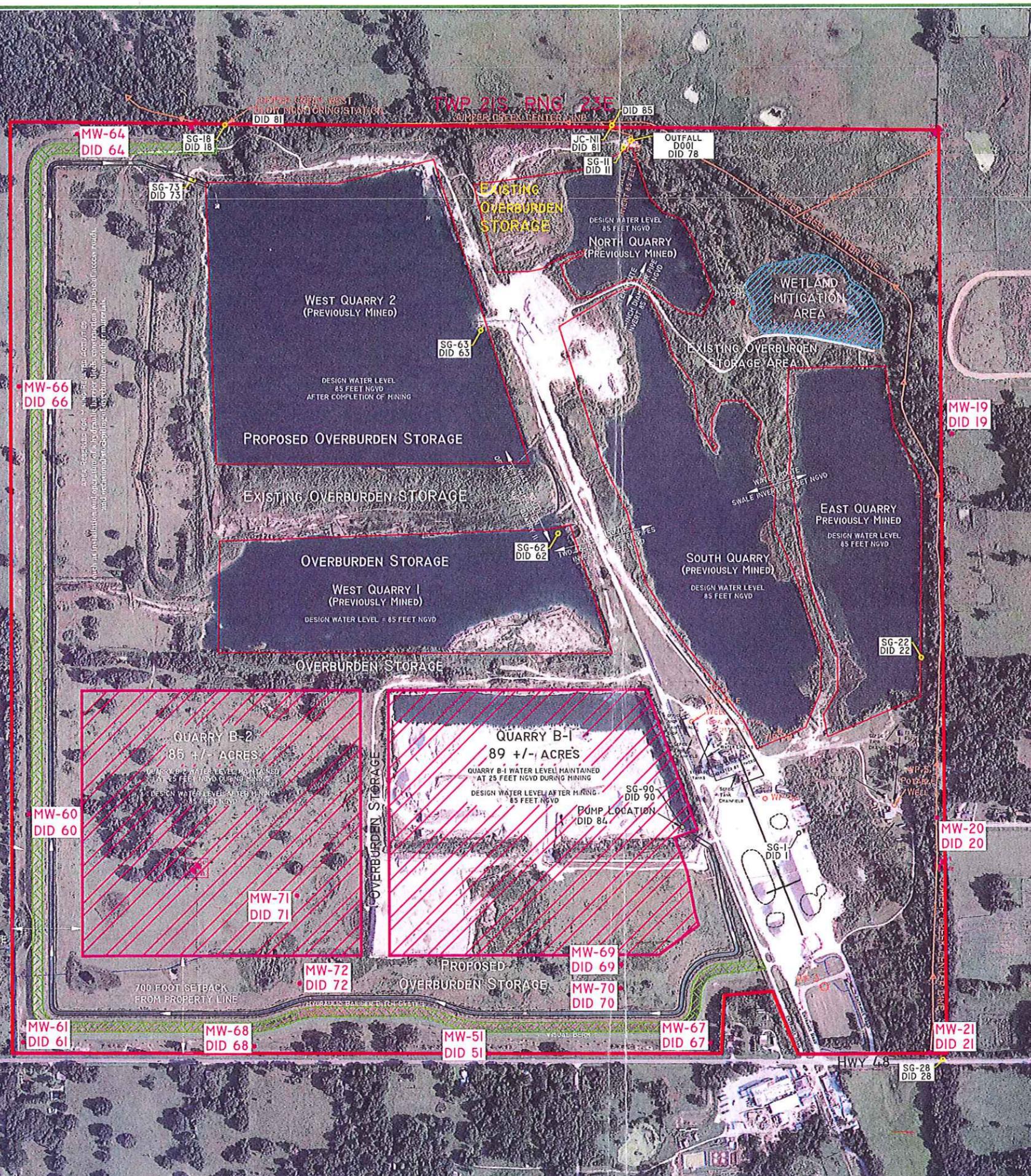
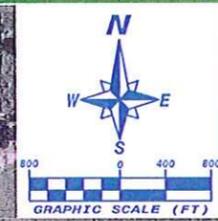
**THE COLINAS GROUP, INC.**  
 Engineering and Environmental Consultants  
 2031 East Edgewood Drive, Suite #5  
 Lakeland, FL 33803  
 Phone: (863) 669-9141 Fax: (863) 669-1742  
 Lakeland \* Sarasota \* Winter Park  
 EB #7934

Date	Project No.	Figure No.
5/19/10	S-262A	1

**LOCATION MAP**  
**CENTER HILL QUARRY**  
 530 WEST KINGS HIGHWAY  
 CENTER HILL, FLORIDA

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REV. No.	DATE	DESCRIPTION	CHK BY:



EXPLANATION	
MONITOR WELL	DISCHARGE POINT
STAFF GAUGE	WATER FLOW
PIEZOMETER	PROPOSED WETLAND POINT
WETLAND POINT	PROPOSED PIEZOMETER
JUPITER CREEK CENTERLINE AND FLOW DIRECTION	CATTLE WATER YIELD
18-INCH DIAMETER CMP CULVERT	MITIGATION AREA

AERIAL FLOWN: Sept. 16, 2009

**THE COLINAS GROUP, INC.**  
 Engineering and Environmental Consultants  
 2031 EAST EDGEWOOD DRIVE, SUITE 5  
 LAKELAND, FL 33803  
 Phone (883) 669-9141 Fax (883) 669-7442  
 Lakeland \* Sarasota \* Winter Park  
 FL 32704

**SITE PLAN**  
**CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.**  
**CENTER HILL QUARRY**  
 530 WEST KINGS HIGHWAY  
 CENTER HILL, FLORIDA 33514

*[Signature]*  
 S-262A  
 PROJECT NO. 5-262A  
 DATE: May 19, 2010  
 SCALE: as noted  
 CALC BY: MRS  
 FIELD BY: MRS  
 DRAWN BY: MRS  
 CHECKED BY: MRS

**Property Owner**  
 Cemex Construction Materials Florida, LLC  
 1501 Belvedere Road  
 West Palm Beach, FL 33406

**Land Surveyor**  
 SurvTech Solutions, Inc.  
 10220 US Highway 92 East  
 Tampa, FL 33601

**Owner/Operator**  
 Cemex Construction Materials Florida, LLC  
 530 W. Kings Hwy.  
 Center Hill, Florida 33514

**Engineer**  
 The Colinas Group, Inc.  
 2031 East Edgewood Drive, Suite 5  
 Lakeland, FL 33803

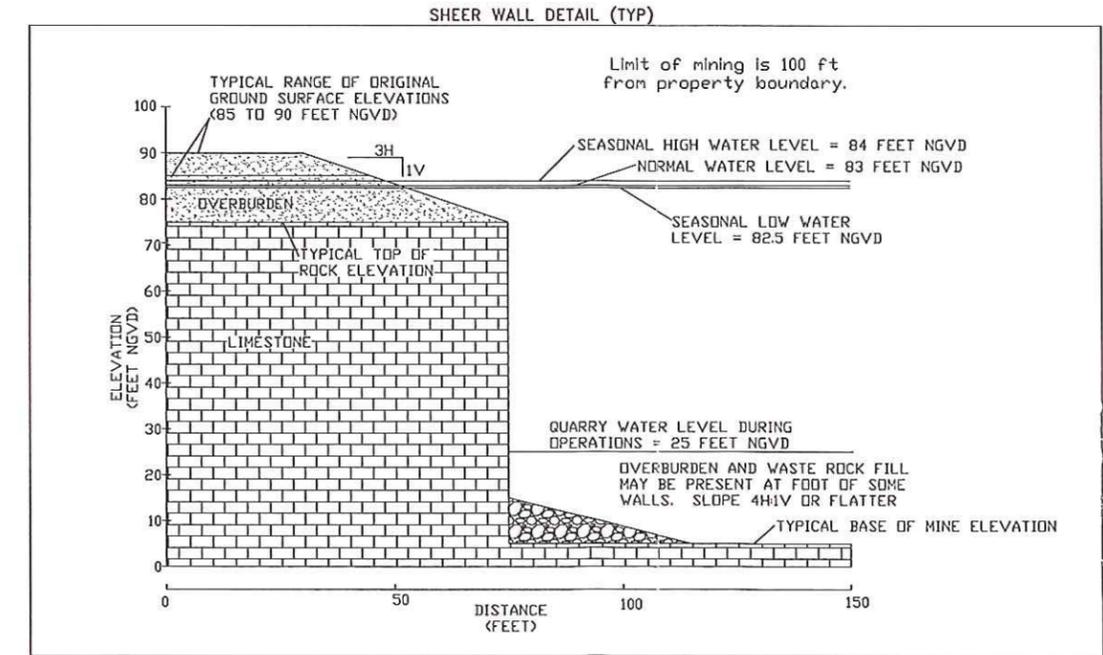
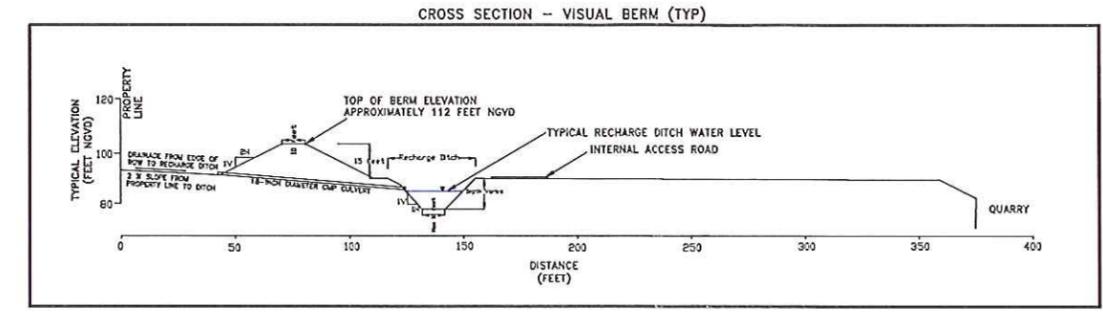
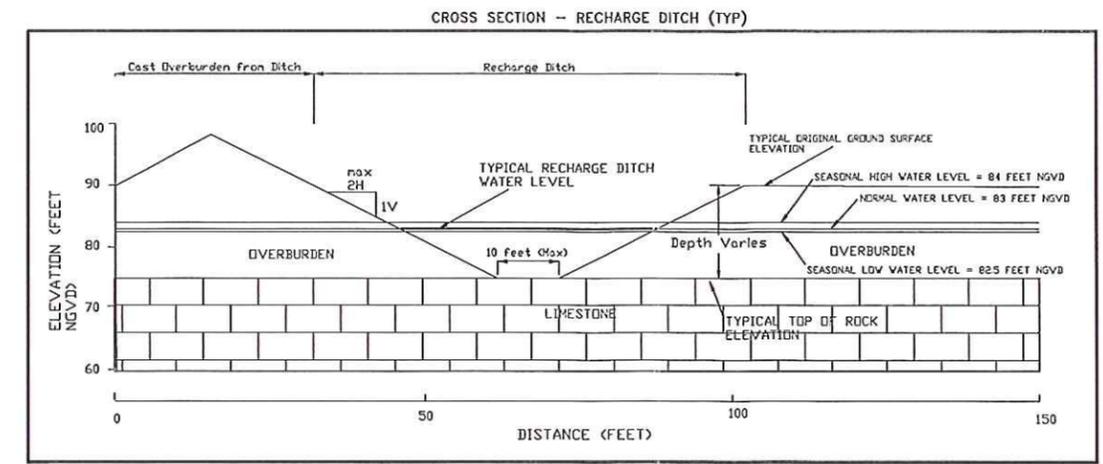
REV. No.	DATE	DESCRIPTION	CHK BY:

**THE COLINAS GROUP, INC.**  
 Engineering and Environmental Consultants  
 2031 EAST EDGEWOOD DRIVE, SUITE 5  
 LAKELAND, FL 33803  
 Phone (800) 600-0141 Fax (800) 600-7142  
 Lakeland \* Sarasota \* Winter Park  
 FL 32804

**TABLE 1**

QUARRY	TOTAL ACRES TO BE MINED	ACREAGE OF ACTUAL QUARRIES	ACREAGE OF EXISTING/PROPOSED WATER BODIES	SEQUENCE OF MINING
Quarry B-1	89 +/-	89 +/-	89 +/- (proposed)	Currently being mined
Quarry B-2	85 +/-	85 +/-	85 +/- (proposed)	To be mined after Quarry B-1
West Quarry II	Completed	91 +/-	91 +/- (existing)	Completed and used for water management and recharge
West Quarry I	Completed	51 +/-	51 +/- (existing)	
North Quarry	Completed	26 +/-	18 +/- (existing)	
South Quarry	Completed	57 +/-	57 +/- (existing)	
East Quarry	Completed	44 +/-	44 +/- (existing)	

Note: all acreages are approximate as measured from aerial photography.



**CROSS SECTIONS**  
**CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.**  
 CENTER HILL QUARRY  
 530 WEST KINGS HIGHWAY  
 CENTER HILL, FLORIDA 33514

*[Signature]*  
 DATE: *[Signature]*  
 THE COLINAS GROUP, INC.  
 ENGINEERING BUSINESS NO. EB-007824  
 2031 E. EDGEWOOD DRIVE, SUITE 5  
 LAKELAND, FL 33803-3601  
 (863) 699-9141

JOB # S-2624  
 DATE: May 19, 2010  
 SCALE: as noted  
 CALC BY: MRS  
 FIELD BY: n/s  
 DRAWN BY: sd  
 CHECKED BY: MRS

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**TABLES**

TAP 1  
WITHDRAWAL POINT INFORMATION  
CENTER HILL MINE  
FOR  
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.

SWFWM/D DID NO.	OWNER ID NO.	CASING DIAMETER (inches)	TOTAL DEPTH (feet)	CASED DEPTH (feet)	DATE INSTALLED	PUMP CAPACITY (gpm)	WITHDRAWAL RATE		PROPOSED	MONITOR	CAPPED	PRODUCTION	MAINLINE DIAMETER (inches)	SPECIFIC USE
							AVERAGE ANNUAL DAY (gpd)	PEAK MONTH AVERAGE DAY (gpd)						
3	WP-3	4.0	UNK	UNK	1975	50	2,000	16,000			X	4.0	MINING (SCALE HOUSE)	
4	WP-4	6.0	300	83	1975	150	3,000	23,000			X	4.0	MINING (MAINTENANCE SHOP)	
5	WP-5	3.0	135	UNK	1975	50	1,000	2,000			X	2.0	MINING (FABRICATION SHOP)	
12	MW-12	2.0	40	40	1984	NA	NA	NA		X		NA	CAPPED (MONITOR)	
13	MW-13	2.0	130	130	1984	NA	NA	NA		X		NA	CAPPED (MONITOR)	
16	MW-16	2.0	40	40	1984	NA	NA	NA		X		NA	CAPPED (MONITOR)	
17	MW-17	2.0	130	130	1984	NA	NA	NA		X		NA	CAPPED (MONITOR)	
19	MW-19	6.0	128	UNK	UNK	NA	NA	NA	X			NA	MONITOR	
20	MW-20	6.0	128	UNK	UNK	NA	NA	NA	X			NA	MONITOR	
21	MW-21	6.0	121	121	1987	NA	NA	NA	X			NA	MONITOR	
27	MW-27	6.0	166	55	1990	NA	NA	NA		X		NA	CAPPED (MONITOR)	
32	WP-32	4.0	100	40	1996	40	1,000	2,000			X	4.0	MINING (SCREEN TOWER)	
36	PT-01	8.0	UNK	UNK	UNK	NA	NA	NA		X		NA	CAPPED (LIVESTOCK WATERING)	
50	MW-50	2.0	150	150	1991	NA	NA	NA	X			NA	MONITOR (OFF-PROPERTY)	
51	MW-51	2.0	150	150	1991	NA	NA	NA	X			NA	MONITOR	
55	MW-55	4.0	80	40	UNK	NA	NA	NA		X		NA	CAPPED (MONITOR)	
56	PZ-56	2.0	20	20	1996	NA	NA	NA		X		NA	CAPPED (MONITOR)	
58	PZ-58	2.0	20	20	1996	NA	NA	NA		X		NA	CAPPED (MONITOR)	
60	MW-60	4.0	80	38	2005	NA	NA	NA	X			NA	MONITOR	
61	MW-61	4.0	80	40	2005	NA	NA	NA	X			NA	MONITOR	
64	MW-64	4.0	120	40	UNK	NA	NA	NA	X			NA	MONITOR	
66	MW-66	4.0	80	40	2005	NA	NA	NA	X			NA	MONITOR	
67	MW-67	4.0	80	40	2005	NA	NA	NA	X			NA	MONITOR	
68	MW-68	4.0	80	40	2005	NA	NA	NA	X			NA	MONITOR	
69	MW-69	4.0	107	20	2006	NA	NA	NA	X			NA	MONITOR	
70	MW-70	4.0	95	20	2006	NA	NA	NA	X			NA	MONITOR	
71	MW-71	4.0	107	20	2006	NA	NA	NA	X			NA	MONITOR	
72	MW-72	4.0	107	20	2006	NA	NA	NA	X			NA	MONITOR	
74	PZ-DS1	2.0	22	NA	2010	NA	NA	NA	X			NA	MONITOR (OFF-PROPERTY)	
75	PZ-DS2	2.0	22	NA	2006	NA	NA	NA	X			NA	MONITOR (OFF-PROPERTY)	
86	PG-1	6.0	206	UNK	UNK	NA	NA	NA	X			NA	MONITOR (OFF-PROPERTY)	
87	PG-2	UNK	430	UNK	UNK	NA	NA	NA	X			NA	MONITOR (OFF-PROPERTY)	
88	PG-3	6.0	> 300	UNK	UNK	NA	NA	NA	X			NA	MONITOR (OFF-PROPERTY)	
89	PG-4	6.0	50	UNK	UNK	NA	NA	NA	X			NA	MONITOR (OFF-PROPERTY)	

TABLE 2  
 SURFACE WATER WITHDRAWAL POINTS  
 CENTER HILL MINE  
 FOR  
 CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.

SWFWMD ID NO.	OWNER ID NO.	SOURCE NAME	LAKE ACREAGE	INTAKE DIAMETER (inches)	PUMP CAPACITY (gpm)	WITHDRAWAL RATE		EXISTING	IN USE	STANDBY	MAINLINE DIAMETER (inches)	SPECIFIC USE
						AVERAGE ANNUAL DAY (gpd)	PEAK MONTH AVERAGE DAY (gpd)					
35	35	SOUTH QUARRY	57	8	250	360,000	360,000	X	X		8	FINE GRIND PLANT
	33	SOUTH QUARRY	57	2	50	25,000	50,000	X	X		2	WETLAND CREATION AREA AUGMENTATION
89	B-1A	QUARRY B-1	90	24	21,600	103,500	155,000	X	X		24	DEWATERING
89	B-1B	QUARRY B-1	90	18	6,500	103,500	N/A	X		X	18	DEWATERING

TABLE 3  
MONITOR SITE INFORMATION  
CENTER HILL MINE  
FOR  
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.

OWNER NAME	OWNER ID NO.	DID NO.	MONITOR TYPE CODE	MONITOR USE CODE	FREQUENCY	LOCATION
Cemex Construction Materials Florida, LLC.	SG-1	1	SG	LL	Semimonthly	South end of South Quarry
Cemex Construction Materials Florida, LLC.	SG-11	11	SG	LL	Semimonthly	North end of North Quarry
Cemex Construction Materials Florida, LLC.	SG-18	18	SG	LL	Semimonthly	Northwest corner of property in Jumper Creek
Cemex Construction Materials Florida, LLC.	MW-19	19	MW	AL	Semimonthly	East of East Quarry
Cemex Construction Materials Florida, LLC.	MW-20	20	MW	AL	Semimonthly	Southeast corner of East Quarry
Cemex Construction Materials Florida, LLC.	MW-21	21	MW	AL	Semimonthly	Southeast corner of property near Jumper Creek
Cemex Construction Materials Florida, LLC.	SG-22	22	SG	LL	Semimonthly	East side of East Quarry
Cemex Construction Materials Florida, LLC.	SG-28	28	SG	LL	Semimonthly	Southeast corner of property in Jumper Creek
Center Hill, LLC. and Danny Cowart	MW-50	50	MW	AL	Semimonthly	West of west property boundary, southwest of MW-66
Cemex Construction Materials Florida, LLC.	MW-51	51	MW	AL	Semimonthly	South property boundary, west of MW-67
Cemex Construction Materials Florida, LLC.	MW-60	60	MW	AL	Semimonthly	West property boundary, north of MW-61
Cemex Construction Materials Florida, LLC.	MW-61	61	MW	AL	Semimonthly	Southwest corner of property
Cemex Construction Materials Florida, LLC.	SG-62	62	SG	LL	Semimonthly	East side of West Quarry I
Cemex Construction Materials Florida, LLC.	SG-63	63	SG	LL	Semimonthly	East side of West Quarry II
Cemex Construction Materials Florida, LLC.	MW-64	64	MW	AL	Semimonthly	Near northwest corner of property
Cemex Construction Materials Florida, LLC.	MW-66	66	MW	AL	Semimonthly	West property boundary, north of MW-60
Cemex Construction Materials Florida, LLC.	MW-67	67	MW	AL	Semimonthly	North of CR 48, west of plant entrance
Cemex Construction Materials Florida, LLC.	MW-68	68	MW	AL	Semimonthly	South property boundary
Cemex Construction Materials Florida, LLC.	MW-69	69	MW	AL	Semimonthly	South of Quarry B-1, north of MW-70
Cemex Construction Materials Florida, LLC.	MW-70	70	MW	AL	Semimonthly	South of Quarry B-1, south of MW-69
Cemex Construction Materials Florida, LLC.	MW-71	71	MW	AL	Semimonthly	South of proposed Quarry B-2, north of MW-72
Cemex Construction Materials Florida, LLC.	MW-72	72	MW	AL	Semimonthly	South of proposed Quarry B-2, south of MW-71
Cemex Construction Materials Florida, LLC.	SG-73	73	SG	HB	Semimonthly	Hydraulic Barrier Ditch west of West Quarry II
Ivelisse and Bobonis Rosa	PZ-OS1	74	PM	AL	Semimonthly	East of CR 567, west of southwest corner of property
Mildred Stevenson	PZ-OS2	75	PM	AL	Semimonthly	South of CR 48, west of CR 713
Ivelisse and Bobonis Rosa	SG-OS1	76	SG	WL	Semimonthly	East of CR 567, west of southwest corner of property
Mildred Stevenson	SG-OS2	77	SG	WL	Semimonthly	South of CR 48, west of CR 713
Cemex Construction Materials Florida, LLC.	D-001	78	F	DF	Continuous*	South of Jumper Creek, north of North Quarry
Cemex Construction Materials Florida, LLC.	JC-West	81	WR	SF	Continuous*	Northwest corner of property in Jumper Creek
Cemex Construction Materials Florida, LLC.	B-1A/B-1B	84	DM	DF	Continuous	Southeast corner of Quarry B-1
Cemex Construction Materials Florida, LLC.	RG-1	85	RG	RF	Continuous	North of North Quarry, west of D-001
Robert G. Stokes, Trustee	BG-1	86	MW	AL	Semimonthly	Stokes property, northeast of mine
City of Webster, Florida	BG-2	87	MW	AL	Hourly (SWFWMD)	City of Webster property, southwest of mine
Center Hill, LLC. and Danny Cowart	BG-3	88	MW	AL	Semimonthly	Center Hill, LLC./Cowart property, northwest of mine
Menaleous Land Group, LLC.	BG-4	90**	MW	AL	Semimonthly	Menaleous Land Group, LLC. property, southeast of mine
Cemex Construction Materials Florida, LLC.	SG-91	91**	SG	MP	Semimonthly	Southeast corner of Quarry B-1

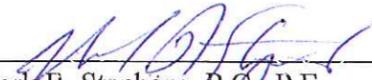
Notes: 1) \* = continuous monitoring when discharge occurs at NPDES Outfall D-001

2) \*\* = proposed District Identification Number

**SUPPLEMENTAL INFORMATION**  
**GENERAL WATER USE PERMIT NO. 20000213.007**  
**CENTER HILL MINE**  
**SUMTER COUNTY, FLORIDA**  
**FOR**  
**CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.**

**PROFESSIONAL ENGINEER CERTIFICATION**  
**Supplemental Information**  
**General Water Use Permit No. 20000213.007**  
**Center Hill Mine**  
**Sumter County, Florida**  
**for**  
**Cemex Construction Materials Florida, LLC.**

I, Mark R. Stephens, PE# 36179, certify that I currently hold an active license in the state of Florida and am competent through education or experience to provide engineering services in the civil engineering discipline contained in this plan, print, specification, or report. I further certify that this plan, print, specification, or report were prepared by me or under my responsible charge as defined in Chapter 61G15-18.001, F.A.C. Moreover, if offered by a corporation, partnership, or through a fictitious name, I certify that the company offering the engineering services, The Colinas Group, Inc., holds an active certificate of authorization (No. 7934) to provide the engineering service.

 Date: 5-21-2010  
Mark R. Stephens, P.E., P.E.  
Florida P.E. License No. 36179  
Engineering Business No. EB-0007934  
The Colinas Group, Inc.  
2031 East Edgewood Drive, Suite 5  
Lakeland, FL 33803-3601  
Phone (863) 669-9141

**DEWATERING MANAGEMENT PLAN  
CENTER HILL MINE  
for  
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.**

**BACKGROUND**

The Cemex Construction Materials Florida, LLC., (Cemex) Center Hill Mine produces limerock excavated from the Eocene Ocala Limestone. The Center Hill Mine location is shown on Figure 1. The mine layout is shown on Figure 2. Land surface elevations at the mine site extend to approximately 95 feet above NGVD according to the Bushnell 7.5 minute USGS Quadrangle.

At the site, the Ocala Limestone is overlain by a layer of overburden that consists of up to approximately 17 feet of unconsolidated sands and clays. These sediments are largely weathered Ocala Limestone residuum and are variable in sand and clay content, thickness and distribution. Instead of being a single continuous layer, the overburden fills pockets and depressions in the top of the Ocala Limestone. The overburden sits unconformably on top of the Ocala limestone and is several hundred feet thick in the area. The principal area of mining occurs in the upper  $\pm$  100 feet of the Ocala limestone. The Floridan aquifer includes the Ocala Limestone, the Avon Park Limestone, and parts of the underlying Lake City Limestone extending 700 to 800 feet below NGVD (USGS WRI 81-11, 1981). The Floridan aquifer at the site may be either semi-confined or unconfined. In areas where surficial sediments are sufficiently thick and continuous, some degree of confinement may exist. However, since the ground water levels within the Ocala Limestone are below the top of the limestone unit in many places across the site, the upper portion of the Floridan aquifer is unconfined over most of the site.

Based on potentiometric surface maps of the upper Floridan aquifer published by the US Geological Survey, the direction of ground water flow in the vicinity of the mine is generally toward the northwest. Based on US Geological Survey potentiometric surface maps for the area and site water level data, normal potentiometric levels, to be used for design purposes, are listed below:

- seasonal low water level is approximately 82.5 feet NGVD
- normal water level is approximately 83 feet NGVD
- seasonal high water level is approximately 84 feet NGVD

The Center Hill Mine is currently mining in Quarry B-1, as shown on Figure 2. Dewatering discharge from Quarry B-1 is routed to a Hydraulic Barrier Ditch and previously mined quarries for water storage and recharge and to minimize off-site drawdown. The dewatering management plan is as follows:

Dewatering water from Quarry B-1 is routed through the Hydraulic Barrier Ditch as shown on Figure 2. Since beginning of dewatering in Quarry B-1, all dewatering discharge has been recharged to the Floridan aquifer on site through the Hydraulic Barrier Ditch and previously mine quarries. Water not recharged to the Ocala limestone through the Hydraulic Barrier Ditch is discharged into

previously mine West Quarry II, then routed to the previously mined West Quarry I, then the previously mined South, East, and North Quarries. Routing the dewatering discharge through the Hydraulic Barrier Ditch and the previously mined quarries maintain the recharge boundaries around the entire Center Hill Mine.

Design water levels in the dewatering management system elements are as follows:

Location	Design Water Elevation (Feet NGVD)
Quarry B-1	25
Hydraulic Barrier Ditch	85
Previously mined West Quarry II	85
Previously mined West Quarry I	85
Previously mined South Quarry	85
Previously mined East Quarry	85
Previously mined North Quarry	85
Outfall D-001 Invert	85

The seasonal high water level, as specified in previous permits, is approximately 84 feet NGVD, whereas the normal seasonal water level is approximately 83 feet NGVD. Using a design water level of 85 feet in the dewatering management system, therefore, allows for storage of up to one (1) foot of water above the seasonal high water level and up to two (2) feet of water above the normal seasonal water levels.

Water above an elevation of 85 feet NGVD in previously mined North Quarry is allowed to discharge through Outfall D-001, as allowed in the current Water Use Permit and the current Florida Department of Environmental Protection Industrial Wastewater Facilities permit.

#### **HYDROLOGIC MONITORING AND DATA ANALYSIS**

The Center Hill Mine has an extensive hydrologic monitoring system in place to monitor ground water and surface water levels on and off site. The current monitoring plan is described in the Environmental Management and Monitoring Plan, dated May 2006, on file with the SWFWMD. The monitoring data and data analyses are presented annually to the SWFWMD. A copy of the latest annual report, dated January 29, 2010, entitled 2009 Annual Water Level Analysis Report, Center Hill Mine, Sumter County, Florida, SWFWMD General Water Use Permit No. 20000213.009 for Cemex Construction Materials Florida, LLC., is attached.

In the annual report, an evaluation of the effectiveness of the current dewatering management system

is presented. The effectiveness of the Hydraulic Barrier Ditch in minimizing the propagation of ground water drawdown and providing recharge to the Floridan aquifer is assessed by: 1) evaluating ground water and surface water elevation data collected at the mine site; and, 2) comparing the quantities of water pumped from West Quarry II with the quantities of water routed to West Quarry II via the HBD.

As presented in the 2010 annual report, the ground water elevation data for the 12 property boundary monitor wells shows that water levels followed a pattern of seasonal fluctuation that correlate well with variations in the ground water elevations of the four offsite background wells, while water levels in the quarries and several of the interior well were influenced more heavily by the effects of dewatering and surface water routing. When compared with water levels at the beginning of the year, ground water elevations at all of the 12 property boundary wells were higher, with differences ranging between +0.64 feet (at well MW-68) and +2.23 (at well MW-19). Additionally, it should be noted that ground water elevations obtained from nine of the 12 property boundary wells (wells MW-19 through MW-21 being the exceptions) were consistently higher than the interpolated (expected) ground water elevations generated during the potentiometric surface analyses.

Additionally, the data shows that water levels in Quarry B-1 were maintained at elevations ranging between approximately 34 to 35 feet NGVD29, or roughly 45 feet below the prevailing ground water elevations. The lowering of surface water levels in Quarry B-1 was offset by maintaining higher surface water elevations in West Quarry I, West Quarry II and the HBD. The surface water elevations in West Quarry I and West Quarry II were maintained at levels ranging from approximately 80 to 84 feet, while in the Hydraulic Barrier Ditch, surface water elevations were maintained between 82 and 83 feet. In the North, South and East Quarries, surface water elevations fluctuated between approximately 71 and 78 feet.

The annual report also provides that during 2009, the weekly pumpage volume for Quarry B-1 ranged between approximately 80 and 175 million gallons per week, with a total pumpage volume of approximately 6,108,500,000 gallons. Not accounting for surface evaporation that occurs during conveyance between the active mine pit and West Quarry II, all of the surface water pumpage withdrawn from Quarry B-1 is retained onsite and is returned to the Floridan aquifer via infiltration in the HBD or the inactive quarries onsite (West Quarry II, West Quarry I and the South, East, and North Quarries).

The conclusion is that use of the Hydraulic Barrier Ditch and previously mined quarries is effective in recharging dewatering discharge back to the Floridan aquifer on site. The Hydraulic Barrier Ditch is also providing an effective means of minimizing the propagation of ground water drawdown and providing recharge to the Floridan aquifer in the vicinity of the Center Hill Mine.

**WATER BALANCE CALCULATIONS**  
**CENTER HILL MINE**  
for  
**CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.**

**ANNUAL AVERAGE WATER BALANCE CALCULATIONS**

Water Loss with Exported Product

1 ton x 2,000 lbs/ton x 0.12% (moisture content) = 240 lbs water /ton product  
240 lbs water /ton product x 1 gallon / 8.35 lbs = 28.7 gallons water / ton product  
28.7 gallons water / ton product x 7,200 tons product/day = 206,946 gallons per day

Water Use in Limestone Grinding Operation

360,000 gallons per day pumped from the inactive South Quarry, used as non-contact cooling water, then returned to the inactive South Quarry.

12,000 gallons per day are proposed to be used at a truck wash facility under a five day per week operation. Spent wash water is collected in a collection sump and reused. Makeup water to the truck wash will be non-contact cooling water from the limestone grinding facility. No additional water will be used to wash trucks.

2,400 gallons per day are required for potable water demands assuming a seven-day per week operation.

**PEAK MONTH WATER BALANCE CALCULATIONS**

Water Loss with Exported Product

1 ton x 2,000 lbs/ton x 0.12% (moisture content) = 240 lbs water /ton product  
240 lbs water /ton product x 1 gallon / 8.35 lbs = 28.7 gallons water / ton product  
28.7 gallons water / ton product x 10,800 tons product/day = 309,960 gallons per day

Water Use in Limestone Grinding Operation

396,000 gallons per day pumped from the inactive South Quarry, used as non-contact cooling water, then returned to the inactive South Quarry.

16,800 gallons per day are proposed to be used at a truck wash facility under a seven day per week operation. Spent wash water is collected in a collection sump and reused. Makeup water to the truck wash will be non-contact cooling water from the limestone grinding facility. No additional water will be used to wash trucks.

3,600 gallons per day are required for potable demands assuming a seven day per week operation.

The estimated potable/sanitary and maintenance Annual Average Day and Peak Month Average Day quantities are listed below.

SFWMD ID NO.	ANNUAL AVERAGE DAY (gallons per day)		PEAK MONTH AVERAGE DAY (gallons per day)	
	Potable/Sanitary	Maintenance	Potable/Sanitary	Maintenance
3	600	800	900	1600
4	1800	2400	2700	4800
5	0	1000	0	2000
32	0	1000	0	2000
<b>TOTALS</b>	<b>2400</b>	<b>5200</b>	<b>3600</b>	<b>10400</b>

Currently, 17 people are employed at the Center Hill Mine. If market conditions allow, up to seven additional employees may be added for a total of 24 employees. The number of visitors that may use potable/sanitary water at the facility is estimated to be between 12 and 24 people per day. The Annual Average Day water use per person is 50 gallons per day. The Peak Month Average Day water use per person is 75 gallons per day.

The truck washing facility has not yet been designed or constructed. Annual Average Day and Peak Month Average Day quantities, indicating pump capacity and hours of operation are only estimates based on similar truck wash facilities. It is currently anticipated that a truck washing system will be moved from another Cemex mine to Center Hill. The water use for the existing system is limited by the capacity of the system to process truck wash wastewater. The system has the capacity to process 12,000 gallons per day of truck wash wastewater, therefore, no more than 1,500 gallons per hour of truck wash wastewater can be used and processed. The Annual average Day quantity is, therefore, estimated to be 12,000 gallons per day based on an eight hour per day, five day per week operation (1,500 gallons per hour). The Peak Month Average Day quantity is limited by the equipment to 16,800 gallons per day based on an eight hour per day, seven day per week operation (1,500 gallons per hour).

**SUMMARY OF REQUESTED QUANTITIES**

WATER USE	REQUESTED QUANTITIES	
	AVERAGE ANNUAL (gallons per day)	PEAK MONTH (gallons per day)
Water Entrained in Product Shipped Off Site	206,946	309,960
Potable Water	2,400	3,600
Truck Wash Water	12,000	16,800
Maintenance	5,200	10,400
Augmentation for Mitigation	25,000	50,000
<b>TOTALS</b>	<b>251,546</b>	<b>390,760</b>

**ALTERNATIVE WATER SUPPLIES  
FEASIBILITY EVALUATION  
CENTER HILL MINE  
for  
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.**

The majority of the water use for the Center Hill Mine is water entrained in product shipped off site. The entrained water comprises 90 percent of the water use. There are no alternative water supplies for entrained water.

Potable/sanitary water and maintenance water is obtained on site. There are no alternative supplies for these uses because the Center Hill Mine is in a rural portion of Sumter County, Florida. The mine is outside the limits of the City of Center Hill and no public supply exists outside the city limits.

In summary, the use of alternative water supplies is found to be infeasible due to the type of water use and the unavailability of alternative sources.

**WATER CONSERVATION PLAN**  
**CENTER HILL MINE**  
**for**  
**CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.**

Water conservation measures include the following:

- Interceptor ditches are used to capture seepage and return it to the seepage to the mine water recirculation system.
- Stormwater captured in the mine is routed through the recirculation system to recharge to the upper Floridan aquifer.
- The facility utilizes bottled water for drinking water.
- Low volume flush toilets will be used in the office building. Portable toilet facilities are used in other working areas.
- Low-volume showerheads will be used if an employee shower facility is installed.
- Weekly checks for leaks in water supply systems will be conducted.
- Water supply to equipment and areas that are unused will be shut off.
- The facility will minimize the use of paved areas to avoid runoff and allow rainfall to infiltrate into the surficial aquifer.
- All hoses will have shut-off nozzles.
- Employees will be educated about the importance and benefits of water conservation.
- A water conservation suggestion box will be placed in the facility to encourage employee suggestions for water conservation.

**Environmental Management and Monitoring Plan  
Cemex Construction Materials Florida, LLC.  
Center Hill Mine  
May 2010**

# Environmental Management and Monitoring Plan

Cemex Construction Materials Florida, LLC.

Center Hill Mine

May 2010

## 1.0 INTRODUCTION

The Environmental Management and Monitoring Plan (EMMP) provides a monitoring plan to identify potential impacts to adjacent properties and water-supply wells, wetlands, groundwater levels, and surface-water features resulting from mining activities at the Center Hill Mine. The EMMP is composed of focused sections for each monitoring activity (wetlands, sinkholes, ground water and surface water, and impact mitigation). The monitoring locations are shown on Figures 1, 2 and 3.

## 2.0 WETLANDS MONITORING

### 2.1 Wetland Monitoring Points

Two (2) isolated wetlands will be monitored under this EMMP. The two wetlands are located off-site (OS1 and OS2). The locations of these wetlands are shown on Figure 1: OS1 is located west of the western property boundary at 5420 County Road 567 and OS2 is located south of County Road 48 at 7384 SE 55<sup>th</sup> Way.

Hydrologic conditions and vegetation will be monitored to detect changes in vegetation zonation and seasonal water levels that may be attributable to nearby mining operations. Photographs will be taken of each wetland during each monitoring event to provide visual records of vegetative and hydrologic conditions.

### 2.2 Wetland Monitoring Plan

**Wetland OS1** is approximately +/- 3.7 acres in size and connects to Jumper Creek through several ditches. The wetland is located on a property to the west of Quarry B-2. Dominant vegetation in the wetland is water hyacinth (*Eichhornia crassipes*). The remaining vegetation that comprises the wetland are maidencane (*Panicum hemitomon*), red ludwigia (*Ludwigia repens*), Cuban bulrush (*Scirpus cubensis*), and Baldwin's spikerush (*Eleocharis baldwinii*). This wetland is in a pasture in which cattle are free to roam.

As shown on the following table, a staff gage and monitor well have been installed in this wetland to detect impacts that may be attributable to nearby quarry operations. Additionally, a vegetation

monitoring transect has been established across the wetland. Vegetation will be sampled in seven 1-m<sup>2</sup> quadrats along the transect semiannually during wet and dry seasons. Photographs will be made of the wetland to visually document conditions at each monitoring event.

**Wetland OS2** is an isolated +/- 3.2 acre wetland located on a property south of County Road 48 off of SE 55<sup>th</sup> Way. Dominant vegetation in the wetland is swamp smartweed (*Polygonum hydropiperoides*), red ludwigia (*Ludwigia repens*), softrush (*Juncus effusus*), and maidencane (*Panicum hemitomon*). This wetland is in an area from which cattle have been excluded for some time. The owners of the property do periodically mow the edges of the wetland but the soils are undisturbed.

As shown on the following table, a staff gage and monitor well have been installed to detect impacts that may be attributable to nearby quarry operations. Additionally, a vegetation monitoring transect has been established across the wetland. Vegetation will be sampled in seven 1-m<sup>2</sup> quadrats along the transect semiannually during wet and dry seasons. Photographs will be taken of the wetland to visually document conditions at each monitoring event.

**Wetland Surface Water and Ground Water Monitoring Points**  
Center Hill Mine  
Hydrologic Monitoring Information

	Wetland Location	Owner ID	SWFWMD District ID Number	Measuring Point Elevation (ft. NGVD)	Piezometer Depth (ft. bls)	Monitoring Frequency	Monitoring Parameter
Piezometers	OS1	PZ-OS1	74	To be established	To be established	Monthly	Water Level
	OS2	PZ-OS2	75	91.60	19.0	Monthly	Water Level
Staff Gages	OS1	SG-OS1	76	DR	NA	Monthly	Water Level
	OS2	SG-OS2	77	DR	NA	Monthly	Water Level

Notes: 1) Locations are shown on Figure 2. 2) ft. NGVD = feet National Geodetic Vertical Datum  
3) ft. bls = feet below land surface 4) NA = not applicable  
5) DR = direct reading, referenced to feet NGVD

The ground water level in each piezometer will be measured to the nearest 0.01 feet using an electric tape. If a piezometer is dry for more 12 consecutive months, the piezometer will be reconstructed to a depth intersecting ground water, as determined by a qualified geologist during drilling. Surface-water levels will be measured directly on the staff gage and recorded in field notes.

Ground water and surface water elevation data will be reported to SWFWMD via the District's online Permit Information Center webpage on a monthly basis, on or before the tenth day of the

following month.

Wetland monitoring will occur semiannually and reporting will occur annually. Reports including vegetation and hydrologic data as well as photographs will be prepared and submitted within 30 days of the monitoring event.

### **3.0 SINKHOLE MONITORING**

Annually, a sinkhole survey will be conducted to locate recent sinkhole activity and sinkhole development within one mile of the Center Hill Mine, as measured from the property boundary. The survey will be conducted using the following methodologies.

1. Annually, Cemex Construction Materials Florida, LLC. (Cemex) will prepare an aerial photograph covering the area of concern. The aerial photograph will be examined to identify sinkholes and sinkhole development.
2. The most recent Florida Geological Survey (FGS) sinkhole database will be reviewed to identify recent sinkholes reported to the Survey.
3. The use of aerial photographs requires ground truthing, if the aerials indicate the presence of a potential subsidence feature. The ground truthing of potential subsidence features will be conducted by walking the property, if access is available.
4. Contiguous land owners will be contacted annually to identify relict and new sinkhole features. If a new sinkhole is identified, permission will be sought to access the property for sinkhole inspection and documentation.

The sinkhole survey will be conducted using a baseline defined by karst features shown on the Bushnell (1958) and Center Hill (1969) USGS 7.5-minute topographic quadrangles. Sinkholes identified on the most recent aerial photographs, FGS database, and during area reconnaissance surveys will be compared to karst features and subsidence features shown on the referenced topographic maps. New and further developed sinkholes will be mapped and submitted to the District annually as part of the Annual Mine Report.

### **4.0 HYDROLOGIC MONITORING**

#### **4.1 Monitoring Existing Conditions Hydrologic Monitoring Plan Outline**

Cemex has instituted and continues to conduct an intensive hydrologic monitoring program at the Center Hill Mine. The purposes of the monitoring program are to:

- 1) provide additional data to continually evaluate the effectiveness of the Hydraulic Barrier Ditch to prevent off-site ground water drawdown impacts; and,
- 2) monitor the current and future drawdown created by quarry dewatering activities in Quarry B-1 and proposed Quarry B-2 and identify triggers for action to mitigate drawdown impacts, if necessary.

The monitoring plan includes:

- Semimonthly (twice per month) monitoring of groundwater elevations at 15 on-site ground water monitor wells (Note: Monitor well MW-69 will be properly abandoned and monitoring discontinued when mining approaches the location);
- Semimonthly monitoring of surface water elevations at nine on-site staff gages;
- Semimonthly monitoring of four off-site background ground water monitor wells;
- Continuous monitoring of discharge to Jumper Creek through Outfall D-001 (DID No. 78), when discharge occurs;
- Continuous monitoring of dewatering discharge quantities to the Hydraulic Barrier Ditch from Quarry B-1 dewatering pumps (DID No. 84);
- Continuous monitoring of flow in Jumper Creek at Outfall JC-West (DID No. 81), when discharges are occurring from Outfall D-001;
- Daily rainfall measured at Outfall D-001 leading from the North Quarry to Jumper Creek (DID No. 85); and,
- Submittal of monthly monitoring data to the District; and,
- Submittal of semi-annual water level data analysis report to the District by the end of January and June each year.

A listing of the monitoring locations, monitoring frequency, reporting frequency, and monitoring parameters is shown on Table 1. The on site monitoring locations are shown on Figure 2.

#### **4.2 Ground Water and Surface Water Level Monitoring**

Ground water levels will be manually measured in the on-site and off-site monitor wells to the nearest 0.01 foot, using an electric water level indicator tape. If a piezometer or monitor well is dry for more three consecutive months, the piezometer or monitor well will be reconstructed to a depth intersecting ground water, as determined by a qualified geologist during drilling. Surface water levels will be measured monthly using a direct reading on the staff gage to the nearest 0.1 foot. All water levels will be measured during the same day of each semimonthly monitoring period.

The off-site background monitor wells include three U.S. Geological Survey (USGS) wells (USGS Well 284105081594301 Stuart Ranch Replacement NR Center Hill, USGS Well 283638082025702

83620204 Town of Webster, FL, and USGS Well 28395208202200183920201 21S23E18 JC 42 Parrot Ranch) and one inactive former stock watering well located on property owned by the Menaleous Land Group, LLC (Sumter County Parcel ID No. Q23=034). Construction details concerning the three USGS wells are contained in Appendix A and the locations are shown on Figure 3.

Drawdown at the property boundaries will be determined by a direct comparison of the ground water elevations in property boundary monitor wells versus the concurrent ground water elevations in the four off-site background monitor wells. The background ground water elevations for the site will be based on a projection of the interpolated ground water elevations from the four background wells. A potentiometric surface elevation map will be prepared using a modification of the standard three-point problem technique, with data from the four background wells. The four points will be connected with straight lines to form an irregular quadrilateral. The potentiometric surface elevations along each line will be calculated using interpolation between the two end points of each line. Equal calculated potentiometric surface elevations along each line will be connected to form a potentiometric surface elevation surface map across the Center Hill Mine. Ground-water elevations measured in each on-site monitor well will be compared to the interpolated potentiometric surface elevations to evaluate drawdown. The difference between the interpolated potentiometric surface elevation and the measured ground-water elevation will be considered drawdown (or mounding).

If drawdown, as described below, at any property boundary monitor well approaches three (3) feet, a drawdown mitigation plan will be prepared and submitted to the District within thirty (30) days of observation of three (3) feet of drawdown. The plan will identify actions to be taken to prevent ten (10) feet of drawdown from occurring at the property boundary, such as adding additional water to the Hydraulic Barrier Ditch, maintaining higher water levels in the Hydraulic Barrier Ditch to cause more recharge, widening and/or deepening the Hydraulic Barrier Ditch, or reducing dewatering pumpage. After receipt of the District's approval of the drawdown mitigation plan, the plan will be implemented before six (6) feet of drawdown occurs at the property boundary. If ten (10) feet of drawdown occurs at the property boundary, dewatering will cease or be reduced.

#### **4.3 Discharge Monitoring**

Discharge through NPDES Outfall D-001 (DID No. 78) is continuously recorded when it occurs and reported to FDEP using Discharge Monitoring Reports (DMRs). The District and the County will be copied on each DMR submittal.

The two Quarry B-1 dewatering pumps (B-1A and B-1B) are connected to hour meters that record the hours of operation for each pump, in 0.1-hour increments. The dewatering discharge from Quarry B-1 (DID No. 84) is calculated by multiplying the weekly hours of operation for the two

pumps by their measured outputs, in gallons per hour. The values are then added together to calculate the total dewatering discharge routed to the Hydraulic Barrier Ditch (HBD).

#### **4.4 Flow Monitoring**

Flow in Jumper Creek will be continuously recorded at the JC-West Outfall ((DID No. 81), near the northwest corner of the mine property, when discharges occur at Outfall D-001. A pressure transducer installed in the creek bed will record hydraulic head pressure readings on an internal, battery-powered datalogger. During months when flow is recorded at Outfall D-001, the logger will be retrieved and the data will be downloaded to a laptop computer. Using a proprietary computer software program, the hydraulic pressure readings will be converted to water level measurements. The resulting values will be input to a standard flow equation to calculate discharge through the JC-West outfall structure (in gallons).

#### **4.5 Data Reporting**

Data recorded as part of the ongoing monitoring program will be reported to SWFWMD on a monthly basis via the District's online Permit Information Center webpage, on or before the tenth day of the following month. Additionally, water level data analysis reports will be submitted semiannually to the District, by the end of January and July of each year. The annual water level analysis reports (submitted in January) will be incorporated into the facility's annual mine report, to be submitted to the FDEP by the end of February each year. All monitoring data will be submitted annually to Sumter County.

### **5.0 IMPACT MITIGATION PLAN**

Drawdown impacts will be prevented by using the Hydraulic Barrier Ditch system and the existing inactive quarries. Dewatering discharge will be routed through the Hydraulic Barrier Ditch system. The Hydraulic Barrier Ditch will discharge to inactive quarries, thereby, maintaining barriers to drawdown around the active quarry.

If water level impacts are observed in either the surface water bodies, adjacent land uses, and/or adjacent wells, Cemex will mitigate the impacts. The following are impact mitigation options that may be implemented by Cemex.

1. If complaints from off-site well owners are received, Cemex will investigate complaints and provide required mitigation under the District's supervision and approval.
2. If wetlands are impacted, as determined through the Environmental Management and Monitoring Plan, then Cemex will provide water, as needed, to the wetlands. The source of

the water will likely be the dewatering discharge, however, Cemex will coordinate with the District for any necessary permit modifications before transferring water to wetlands.

3. Drawdown impacts can be mitigated by maintaining higher water levels in the Hydraulic Barrier Ditch system and/or pumping more water through the ditch.
4. A well-impact escrow account will be established. The escrow account will be available to finance mitigation of impacts to individual, off-site water-supply wells. Examples of how the mitigation account can be used are to deepen a well, replace a pump, redevelop a well, reconstruct a well, or install a sediment filter. The intent of the escrow account is to have money readily available to study the problem so the well owner does not have to pay for the study, and to pay for any impacts determined to be caused by the mining activity.
5. As discussed above, if drawdown at any property boundary monitor well approaches three (3) feet, a drawdown mitigation plan will be prepared and submitted to the District. The plan will identify actions to be taken to prevent ten(10) feet of drawdown from occurring at the property boundary, such as adding additional water to the Hydraulic Barrier Ditch, maintaining higher water levels in the Hydraulic Barrier Ditch to cause more recharge, widening and/or deepening the Hydraulic Barrier Ditch, or reducing dewatering pumpage. After receipt of the District's approval of the drawdown mitigation plan, the plan will be implemented before six (6) feet of drawdown occur at the property boundary. If ten (10) feet of drawdown occurs at the property boundary, dewatering will cease or be reduced.
6. If new sinkholes are identified during the annual sinkhole monitoring, or are reported to Cemex by contiguous land owners, permission will be sought to access the property for sinkhole inspection and documentation. If the sinkhole appears to be drawdown-induced, based on evidence such as groundwater and surface-water monitoring data and the presence of relict karst features, the sinkhole will be investigated using subsurface and/or geophysical investigation methods appropriate for the situation. If the investigation determines that the sinkhole is drawdown-induced, then Cemex will prepare and submit a plan to the District for sinkhole mitigation. The plan may include mitigation methods such as additional monitoring, drawdown reduction, and sinkhole stabilization. After receipt of the District's approval of the mitigation plan, the plan will be implemented within 30 days.

PROFESSIONAL ENGINEER CERTIFICATION

**Environmental Management and Monitoring Plan**

Cemex Construction Materials Florida, LLC.

Center Hill Mine

May 2010

I, Mark R. Stephens, PE# 36179, certify that I currently hold an active license in the state of Florida and am competent through education or experience to provide engineering services in the civil engineering discipline contained in this plan, print, specification, or report. I further certify that this plan, print, specification, or report were prepared by me or under my responsible charge as defined in Chapter 61G15-18.001, F.A.C. Moreover, if offered by a corporation, partnership, or through a fictitious name, I certify that the company offering the engineering services, The Colinas Group, Inc., holds an active certificate of authorization (No. 7934) to provide the engineering service.

 Date: 5-21-2010  
Mark R. Stephens, P.E., P.E.

Florida P.E. License No. 36179

Engineering Business No. EB-0007934

The Colinas Group, Inc.

2031 East Edgewood Drive, Suite 5

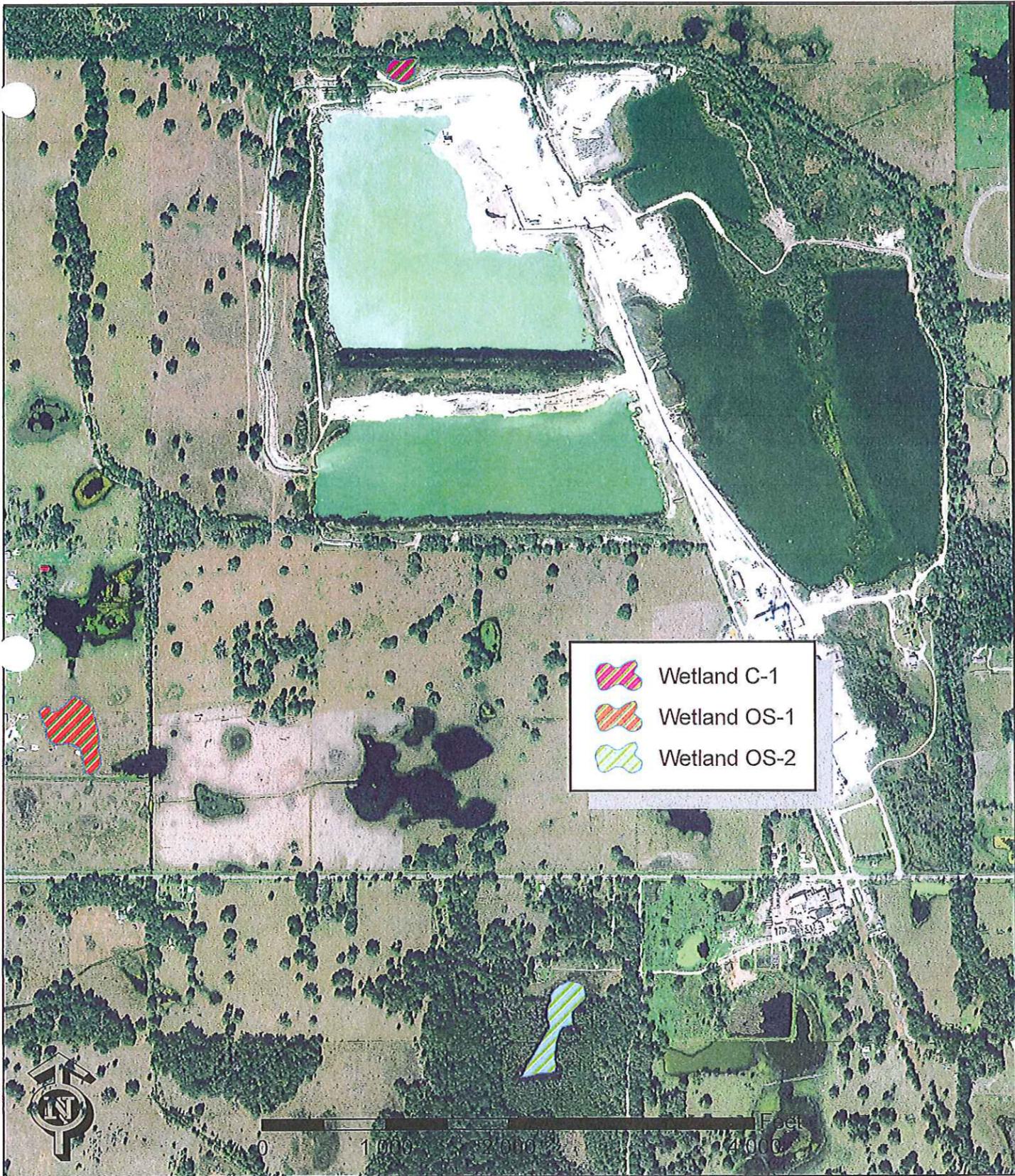
Lakeland, FL 33803-3601

Phone (863) 669-9141

TABLE 1  
 HYDROLOGIC MONITORING PLAN  
 CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC - CENTER HILL MINE  
 MAY 2010  
 WUP NO. 20000213

Monitoring Station	Owner I.D.	District I.D.	Location	Measuring Point Elevation	Well Casing Diameter (inches)	Well Cased Depth (feet)	Well Total Depth (feet)	Monitoring/Reporting Frequency	Monitoring Parameter
On-Site Monitor Wells	MW-19	19	E of East Quarry	95.66	6	Unknown	128	Semimonthly/Monthly	Water Level
	MW-20	20	SE corner of East Quarry	93.50	6	Unknown	128	Semimonthly/Monthly	Water Level
	MW-21	21	SE property corner at Jumper Creek	90.37	6	Unknown	121	Semimonthly/Monthly	Water Level
	MW-50	50	W of west property line	88.93	2	20' solid / 130' screen	150	Semimonthly/Monthly	Water Level
	MW-51	51	South property line	98.53	2	20' solid / 130' screen	150	Semimonthly/Monthly	Water Level
	MW-60	60	Property line W of Quarry B-2	90.53	4	38	80	Semimonthly/Monthly	Water Level
	MW-61	61	SW corner of property	89.59	4	40	80	Semimonthly/Monthly	Water Level
	MW-66	66	Property line W of West Quarry II	98.09	4	40	80	Semimonthly/Monthly	Water Level
	MW-67	67	SE of Quarry A	91.29	4	40	80	Semimonthly/Monthly	Water Level
	MW-64	64	NW corner of property	96.18	4	40	120	Semimonthly/Monthly	Water Level
	MW-68	68	South property line	90.87	4	40	80	Semimonthly/Monthly	Water Level
	MW-69*	69	S of Quarry B-1, N of MW-70	98.20	4	20	107	Semimonthly/Monthly	Water Level
	MW-70	70	S of Quarry B-1, S of MW-69	93.02	4	20	95	Semimonthly/Monthly	Water Level
	MW-71	71	S of Quarry B-2, N of MW-72	90.71	4	20	107	Semimonthly/Monthly	Water Level
MW-72	72	S of Quarry B-2, S of MW-71	90.32	4	20	107	Semimonthly/Monthly	Water Level	
Off-site Background Monitor Wells	BG-1 (Stuart)	86	Stuart Ranch, NE of Mine	102.59	6	Not Reported	206	Semimonthly/Monthly	Water Level
	BG-2 (Webster)	87	Town of Webster, SW of Mine	Not Reported	Not Reported	Not Reported	430	Semimonthly/Monthly	Water Level
	BG-3 (Cownt)	88	Cownt Ranch, NW of Mine	90.08	6	Not Reported	> 300	Semimonthly/Monthly	Water Level
	BG-4 (Menaleous)	91 (proposed)	Menaleous Property, SE of Mine	99.25	6	Not Reported	59	Semimonthly/Monthly	Water Level
Off-site Wetland Piezometers	PZ-OS1	74	Rosa Property, W of Mine	Proposed	2 (proposed)	None (proposed)	22 (proposed)	Semimonthly/Monthly	Water Level
	PZ-OS2	75	Stevenson Property, S of Mine	91.60	2	None	22	Semimonthly/Monthly	Water Level
Staff Gages	SG-1	1	South Quarry	NGVD	NA	NA	NA	Semimonthly/Monthly	Water Level
	SG-11	11	North Quarry	NGVD	NA	NA	NA	Semimonthly/Monthly	Water Level
	SG-18	18	Jumper Creek @ NW corner of property	NGVD	NA	NA	NA	Semimonthly/Monthly	Water Level
	SG-22	22	East Quarry	NGVD	NA	NA	NA	Semimonthly/Monthly	Water Level
	SG-28	28	Jumper Creek @ SW corner of property	NGVD	NA	NA	NA	Semimonthly/Monthly	Water Level
	SG-62	62	West Quarry I	NGVD	NA	NA	NA	Semimonthly/Monthly	Water Level
	SG-63	63	West Quarry II	NGVD	NA	NA	NA	Semimonthly/Monthly	Water Level
	SG-73	73	Hydraulic Barrier Ditch @ West Quarry II	NGVD	NA	NA	NA	Semimonthly/Monthly	Water Level
SG-90 (proposed)	90 (proposed)	SE corner of Quarry B-1	NGVD	NA	NA	NA	Semimonthly/Monthly	Water Level	
Jumper Creek	Outfall D-001	78	North Quarry outfall to Jumper Creek	NA	NA	NA	NA	Continuous/Monthly	Discharge (total gallons)
	Jumper Creek West	81	Jumper Creek at Property Boundary	NA	NA	NA	NA	Continuous/Monthly (when discharging at D-001)	Flow (total gallons)
Quarry B-1 Dewatering Discharge to Hydraulic Barrier Ditch	Pumps B-1A and B-1B	84	SE corner of Quarry B-1	NA	NA	NA	NA	Continuous/Monthly	Hours and Total Gallons
Rainfall	Rainfall at Outfall D-001	85	Outfall D-001 N of North Quarry	NA	NA	NA	NA	Daily/Monthly	Daily Rainfall

Notes: 1. NGVD in the "Measuring Point Elevation" column denotes that the staff gage reads an actual elevation and does not require a measuring point elevation.  
 2. \* MW-69 will be properly abandoned and discontinued as a monitoring location as mining approaches the location.



-  Wetland C-1
-  Wetland OS-1
-  Wetland OS-2



0 1,000 2,000 4,000 Feet



**CEMEX**  
 CEMEX Construction Materials Florida, LLC  
 Southeast Environmental Solutions, Inc.  
 801 North Park Road  
 Plant City, Florida 33563  
 813-752-1289

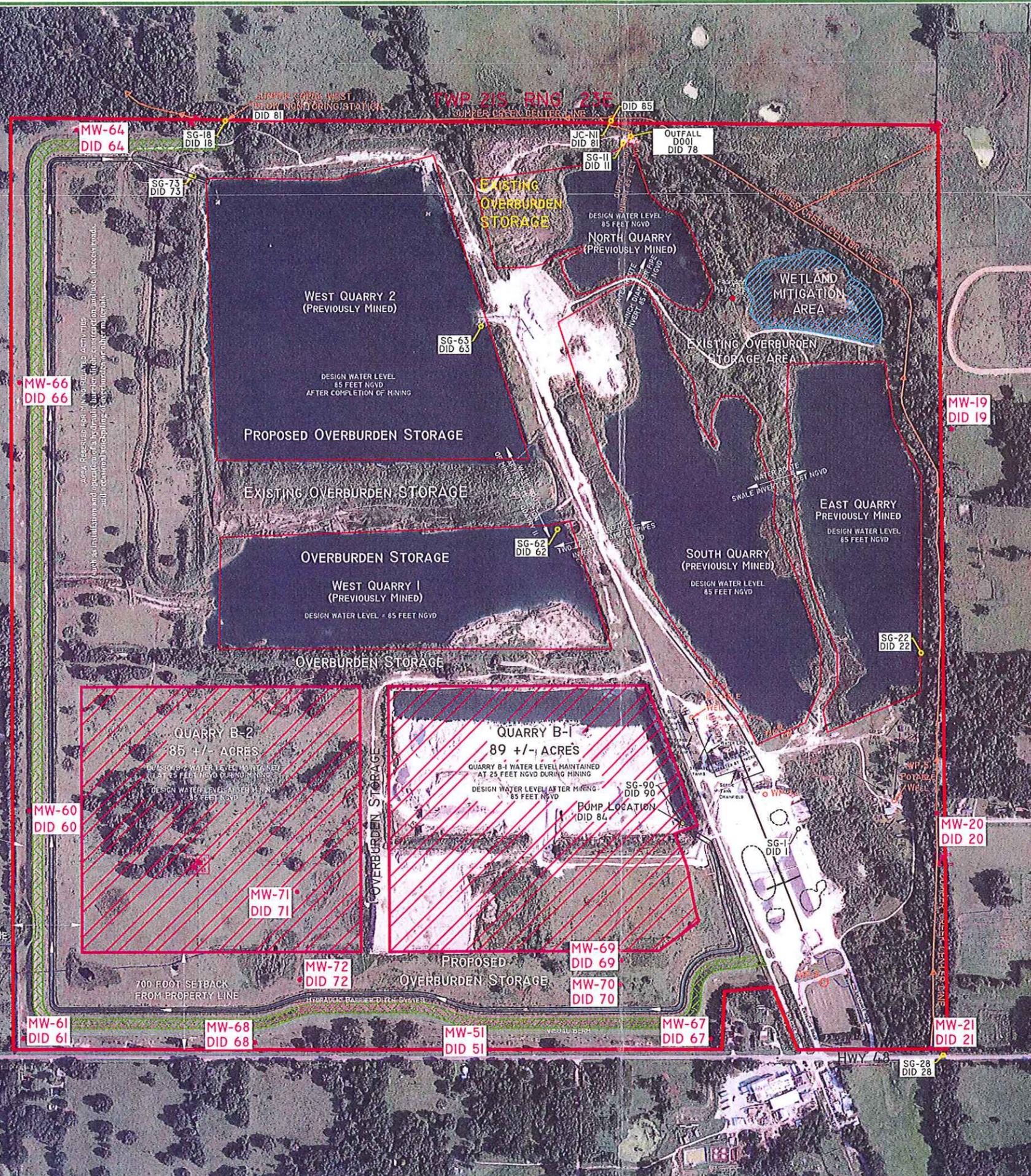
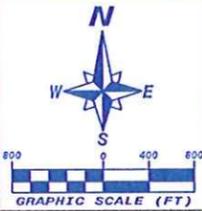
**Center Hill Limerock Mine  
 Monitored Wetland Locations**

598B

Figure 1

C:\CIVIL\_3D\PROJECTS\262AC CENTER HILL MINE\DWG\MAY 2010 OPERATING PLAN WITH PROPOSED MODIFICATIONS.DWG 5/19/10

REV. No.	DATE	DESCRIPTION	CHK BY:



**EXPLANATION**

MONITOR WELL	DISCHARGE POINT
STAFF GAGE	WATER FLOW
PNEUMETER	PROPOSED WITHDRAWAL POINT
WITHDRAWAL POINT	PROPOSED PNEUMETER
JUMPER CREEK CENTERLINE AND FLOW DIRECTION	CATTLE WATER WELL
18 INCH DIAMETER CMP CONDUIT	MITIGATION AREA

AERIAL FLOWN: Sept. 16, 2009  
 Sections 16, 17, 20, 21,  
 Township 21 SOUTH, Range 23 EAST

**THE COLINAS GROUP, INC.**  
 Engineering and Environmental Consultants  
 2031 EAST EDGEWOOD DRIVE SUITE 5  
 LAKELAND, FL 33803  
 Phone (883) 669-9141 Fax (883) 669-7742  
 Lakeland \* Sarasota \* Winter Park  
 FLA 27804

**ONSITE MONITORING LOCATIONS**  
 CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.  
 CENTER HILL QUARRY  
 530 WEST KINGS HIGHWAY  
 CENTER HILL, FLORIDA 33514

*Mark R. Springer*  
 DATE: 5/19/10  
 Mark R. Springer, P.E., P.G.  
 FLORIDA P.E. REG. NO. 36179  
 THE COLINAS GROUP, INC.  
 ENGINEERING BUSINESS NO. EB-0007034  
 2031 E. EDGEWOOD DRIVE, SUITE 5  
 LAKELAND, FL 33803-3001  
 (883) 669-9141

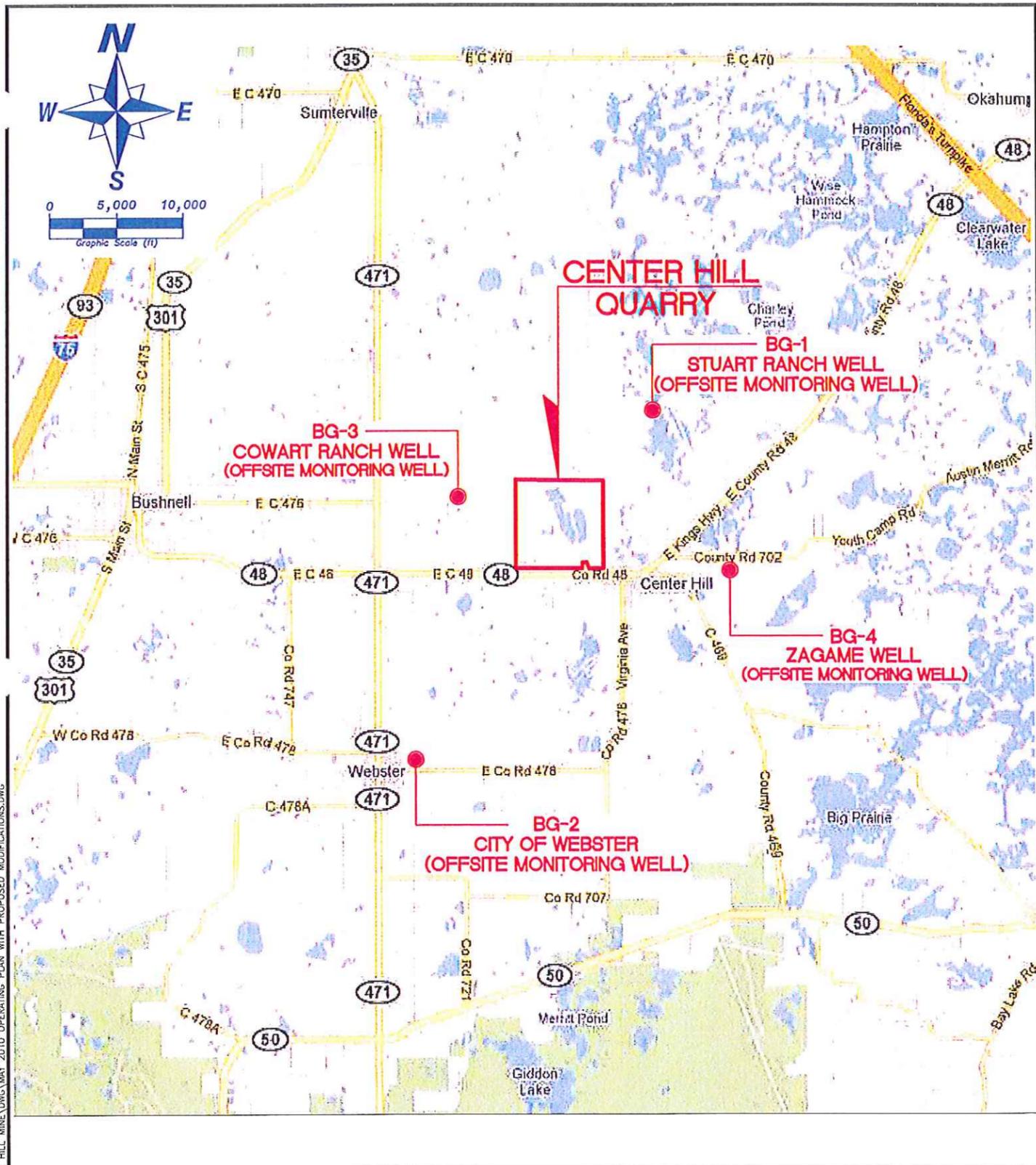
**Property Owner**  
 Cemex Construction Materials Florida, LLC  
 1501 Belvedere Road  
 West Palm Beach, FL 33406

**Land Surveyor**  
 SurvTech Solutions, Inc.  
 10220 US Highway 92 East  
 Tampa, FL 33601

**Owner/Operator**  
 Cemex Construction Materials Florida, LLC  
 530 W. Kings Hwy.  
 Center Hill, Florida 33514

**Engineer**  
 The Colinas Group, Inc.  
 2031 East Edgewood Drive  
 Suite 5  
 Lakeland, FL 33803

JOB # S-262A  
 DATE: May 19, 2010  
 SCALE: as noted  
 CALC BY: MRS  
 FIELD BY: n/o  
 DRAWN BY: cd  
 CHECKED BY: MRS



162AC-CENTER HILL MINE.DWG\MAY 2010 OPERATING PLAN WITH PROPOSED MODIFICATIONS.DWG

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<b>CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.</b>	Date	Project No.	Figure No.
	May 19, 2010	S-262A	3

**THE COLINAS GROUP, INC.**  
 Engineering and Environmental Consultants  
 2031 East Edgewood Drive, Suite #5  
 Lakeland, FL 33803  
 Phone: (863) 669-9141 Fax: (863) 669-1742  
 Lakeland \* Sarasota \* Winter Park  
 ER #7934

**OFFSITE MONITORING  
 WELL LOCATIONS  
 CENTER HILL QUARRY**  
 530 WEST KINGS HIGHWAY  
 CENTER HILL, FLORIDA

**APPENDIX A**

**USGS WATER LEVEL MONITOR WELL DATA**



Water Resources

Data Category: [Site Information](#) | [Geographic Area: Florida](#)

[Click Here](#) for information on data reliability

**USGS 283638082025702 83620204 TOWN OF WEBSTER, FL.**

[Available data for this site](#)

[Site home page](#)

**Site Description**

**LOCATION**

Latitude 28°36'38", Longitude 82°02'57" NAD27,  
Sumter County, Florida, Hydrologic Unit 03100208

**SITE TYPE:**

Ground Water

**DESCRIPTION**

The depth of the well is 430 feet below land surface.  
Altitude of land surface datum 91.85 feet above sea level NGVD29.

**AVAILABLE DATA:**

Data Type	Begin Date	End Date	Count
Water Quality Samples	1979-04-30	2000-09-25	219
Ground-water levels	1978-04-06	2006-02-21	292

**OPERATION:**

Record for this site is maintained by the USGS Florida - Altamonte Springs Office Water Science Center

**CONTACT INFORMATION**

Email questions about this site to [Florida NWISWeb Data Inquiries](#)

Questions about data

Feedback on this website

\*\* USGS 283638082025702 83620204 TOWN OF WEBSTER, FL.

<http://waterdata.usgs.gov/fl/nwis/nwisman/>

[Florida NWISWeb Data Inquiries](#)

[Florida NWISWeb Maintainer](#)

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Department of the Interior, U.S. Geological Survey

[USGS Water Resources of Florida](#)

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