

March 23, 2026

MEMORANDUM

TO: Jason Patterson, P.G., Lead Scientific Modeler, Environmental Flows and Levels Section

FROM: Tiffany Horstman, P.G., Senior Professional Geologist, Geohydrologic Data Section
Kristina Mallams, P.G., Professional Geologist, Geohydrologic Data Section

SUBJECT: Central Florida Water Initiative Data, Monitoring, and Investigations Team North Lake Wales Surficial Aquifer Monitor Well Construction Summary

The Central Florida Water Initiative (CFWI) is a planning-level effort to review existing and projected water demands in a five-county region of Central Florida. This initiative requires coordination between various stakeholders including the Southwest Florida Water Management District (District), South Florida Water Management District (SFWMD), and St. Johns River Water Management District (SJRWMD). The CFWI Data, Monitoring, and Investigations Team (DMIT) ensures that hydrologic, environmental, and other pertinent data collected throughout the CFWI Planning Area are identified, inventoried, and accessible to support the CFWI technical initiatives.

As part of this effort, the District's Geohydrologic Data Section was tasked with installing a surficial aquifer monitor well at the North Lake Wales well site in Polk County, Florida (attachment 1). The well site is on a parcel of land granted by easement to the District by the City of Lake Wales (attachment 2). Long-term water level data collected from this well site will help understand how water level changes in the surficial aquifer caused by groundwater withdrawals relate to water level changes in North Lake Wales. The data will also support the assessment and evaluation of minimum lake levels.

National Environmental Technology, Incorporated (NET) installed the surficial aquifer monitor well from September 4 to 23, 2024, using a Central Mine Equipment 75 (CME) drill rig and the hollow-stem auger method. NET used a posthole digger to collect lithologic samples from land surface to 4 feet below land surface (bls). Then, NET pushed in temporary casing to about 5 feet bls and drilled a hole to 8 feet bls. Next, NET used the CME with hollow-stem augers and mud to advance a split-spoon sampler and collect lithologic samples every 2 feet from 8 to 50 feet bls. The samples were described by the on-site geologist (attachment 3). The water level in the borehole was noted at 22 feet bls during sample collection.

After split-spoon sampling was completed, NET drilled a 6-inch nominal hole to 50 feet bls using hollow-stem augers and attempted to set 35 feet of 2-inch polyvinyl chloride (PVC) screen and 15 feet of PVC casing; however, the installation was unsuccessful. NET re-drilled a nominal hole using 4.25-inch hollow-stem augers with a bentonite slurry from land surface to 50 feet bls. Then, NET installed 2-inch pre-packed schedule 40, 0.010-inch slot, PVC screen from 15 to 50 feet bls, and 2-inch, schedule 40, PVC casing from 3 feet above land surface to 15 feet bls. Next, NET installed 20-30 silica sand from 50 to 12.5 feet bls and cement grout from 12.5 feet bls to land surface. A locking metal well cover and a 2-feet by 2-feet by 6-inch concrete pad were placed around the well (attachment 4). The well was developed after completion. The well is equipped for continuous hourly water-level monitoring.

SUBJECT: Central Florida Water Initiative Data, Monitoring, and Investigations Team North Lake Wales
Surficial Aquifer Monitor Well Construction Summary

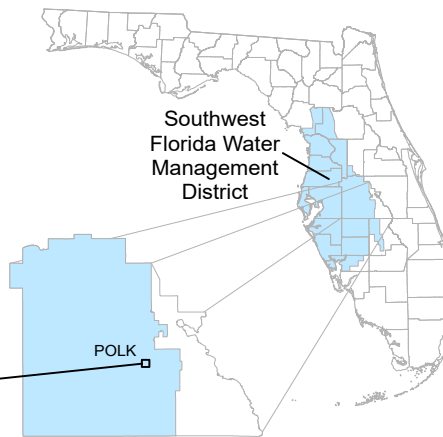
Page 2

March 23, 2026

The following data are attached: maps showing the location and layout of the well site (attachment 1), easement agreement (attachment 2), the field description of the lithologic samples collected at the well site (attachment 3), the well as-built diagram (attachment 4), and the daily drilling logs detailing the well construction activities (attachment 5).

TMH:kdm
Attachments (5)

Attachment 1



EXPLANATION

- North Lake Wales Well Site
 Section/Township/Range: S35/T29S/R27E
 Latitude: 27° 54' 39.71" N
 Longitude: 81° 34' 49.51" W

Directions:

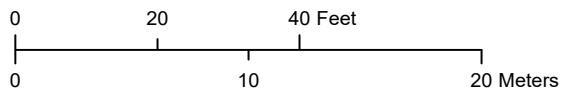
From Florida Highway 60 E/State Road 60 E in Lake Wales, turn north onto Dr M.L.K. Jr Blvd for 1 mile. Turn east onto Dr JA Wiltshire Ave for 0.4 miles. Turn north onto Florida Highway 17 N/Scenic Highway for 0.2 miles. Turn east onto Florida Highway 17 Alt/Burns Ave for 0.5 miles. Turn south onto Greenleaf Ln for 0.2 miles. Turn east onto Greenbrough Dr for 33 feet and the wellsite will be on the south side of the road.

[AVE, Avenue; DR, Drive; E, east; FIPS, Federal Information Processing Standards; HARN, High Accuracy Reference Network; HWY, Highway; Ln, Lane; N, north; NAD, North American Datum; RD, Road; S, south; S/T/R, Section/Township/Range; ST, street; W, west]

Attachment 1



Base from Southwest Florida Water Management District digital orthophoto, 2023
 NAD 1983 HARN StatePlane Florida West FIPS 0902 Feet Projection



[Aq, aquifer; DR, Drive; FIPS, Federal Information Processing Standards; HARN, High Accuracy Reference Network; LN, Lane; N, north; NAD, North American Datum; Surf, surficial; W, west]

Attachment 2

Prepared by:
Southwest Florida Water Management District
2379 Broad Street
Brooksville, FL 34604

INSTR # 2024155912
BK 13180 Pgs 0849-0853 PG(s)5
07/09/2024 11:34:35 AM
STACY M. BUTTERFIELD,
CLERK OF COURT POLK COUNTY
RECORDING FEES 44.00

Return recorded original to:
Southwest Florida Water Management District
2379 Broad Street
Brooksville, FL 34604-6899
Attn. Operations and Land Management Bureau

PERPETUAL EASEMENT

This Easement (this "Easement") is made and entered into this 6th day of March, 2024, by and between City of Lake Wales, a political subdivision of the State of Florida, having an address of 201 West Central Avenue, Lake Wales, Florida 33853, hereinafter called "Grantor", and the Southwest Florida Water Management District, a public corporation, having an address of 2379 Broad Street, Brooksville, Florida 34604-6899, hereinafter referred to as "Grantee".

Grantor, for and in consideration of the sum of Ten Dollars and no cents (\$10.00) and other good and valuable consideration from Grantee to Grantor, the receipt and sufficiency of which are hereby acknowledged, hereby grants, bargains, sells and conveys to Grantee a non-exclusive, perpetual easement to enter upon, over and across and to use any and all lands more particularly described below for solely for the following purposes:

- a. To construct, maintain, repair or replace one monitoring well and data monitoring equipment over the land more particularly described on Exhibit "A" (the "Well Site Easement Area"); and
- b. For ingress and egress upon, over and across the land more particularly described on Exhibit "A" (the "Access Easement Area") to access the monitoring wells and equipment in order to perform hydrologic measurements.

Grantee shall exercise all of its rights contained in this Easement in the least intrusive manner so as not to interfere with Grantor's use of its property. Grantor reserves the right to use the Well Site Easement Area and Access Easement Area in any manner not inconsistent with this Easement; provided, however, that Grantor shall avoid physically disturbing the well casing or cover (water meter box) of the monitoring well or wells in any way without the prior written approval of Grantee, which approval shall not be unreasonably withheld, conditioned or delayed. Grantee hereby agrees to restore the Access Easement Area to the same condition as it was prior to any construction, maintenance, repair or access by Grantee.

Grantee hereby agrees to protect, indemnify and hold harmless the Grantor from and against any and all liabilities, losses, damages or expenses, reasonable attorneys' fees and costs, whether incurred out of court or in litigation including fees and costs incurred for representation on appeals, expert witness fees and costs for paralegal assistance, arising on account of, relating to, in connection with loss of life, bodily injury or damage to property, arising out of the use of the Well Site Easement Area or the Access Easement Area by the Grantee and its contractors and agents, except to the extent such liability is finally judicially determined to directly arise from the willful misconduct or negligence of the Grantor. Upon receiving knowledge of any suit, claim or demand asserted by a third party that Grantor believes is

Attachment 2

covered by this indemnity, the Grantor shall give the Grantee notice of the matter. Any failure or delay of the Grantor to notify the Grantee of any such suit, claim or demand shall not relieve the Grantee of its obligations under this provision but shall reduce such obligations to the extent of any increase in those obligations caused solely by any such failure or delay. This provision shall not be construed as a waiver of Grantee's sovereign immunity for torts or an extension of such liability beyond the limits established in Section 768.28, F.S.

All provisions of this instrument, including the benefits and burdens, run with the land and are binding upon and inure to the benefit of the respective assigns, successors, and tenants of the parties hereto. This Easement may be amended or modified only by an instrument signed by Grantor and Grantee.

The formation, interpretation and performance of this Easement shall be construed pursuant to and governed by the laws of the State of Florida. In the event of any dispute arising out of this Easement or any instrument given in connection herewith, or in the event it shall become necessary for any party to employ counsel to protect the party under this Easement or any instrument given in connection herewith, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs, whether incurred out of court or in litigation including fees and costs incurred for representation on appeals, expert witness fees and costs for paralegal assistance, to the extent permitted under Section 768.28, F.S. This provision does not constitute a waiver of the Grantee's sovereign immunity or extend the Grantee's liability beyond the limits established in Section 768.28, F.S.

This grant shall not constitute a dedication to the public, and no parties shall have any rights or entitlements pursuant to the terms of this Easement except as specifically set forth herein.

[signature pages follows]

Attachment 2

IN WITNESS WHEREOF, Grantor has caused these presents to be executed the day and year first written above.

Grantor:

Signed, sealed and delivered
in the presence of:

City of Lake Wales, a political subdivision
of the State of Florida

Cynthia Monk
Witness #1 signature

By: [Signature]
Name: Jack Hilligoss
Title: Mayor

Cynthia Monk
Print Witness #1 name

[Signature]
Witness #2 signature

Jennifer Naneck
Print Witness #2 name

ACKNOWLEDGMENT

STATE OF FLORIDA
COUNTY OF Polk

The foregoing instrument was acknowledged before me this 6th day of March 2024, by Jack Hilligoss, as Mayor for Lake Wales City of Lake Wales County, a political subdivision of the State of Florida. He/She is personally known to me, or has produced _____ as identification.

(Seal)

[Signature]
Name of Notary
Jennifer Naneck
(Name of Notary typed, printed or stamped)

Commission No. 18780
My Commission
Expires: 11/14/2025



Attachment 2

EXHIBIT "A"

Legal Description Parcel 20-020-145 (Well Site Area)

A parcel of land being a portion of Lot 2 of Greenbriar - Phase One, as recorded in Plat Book 67, Page 25 of the Public Records of Polk County, Florida, lying and being in Section 35, Township 29 South, Range 27 East, Polk County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Lot 2 of Greenbriar - Phase One, Recorded in Plat Book 67 Page 25, of the Public Records of Polk County, Florida, said point being on the south line of Greenbrough Drive, a 50 foot right of way per said Greenbriar - Phase one, thence along the north line of said Lot 2 of Greenbriar - Phase One, South 65°18'39" East (Being the basis of bearings for this description) a distance of 56.66 feet; thence departing said north line of Lot 2 of Greenbriar - Phase One, and along a line that is 91.99 feet northwest of and parallel to the east line of Lot 1 of said Greenbriar - Phase One, South 24°41'21" West, a distance of 15.00 feet; thence along a line that is 15.00 feet southwest of and parallel to the north line of said Lot 2, North 65°18'39" West, a distance of 20.00 feet for a **POINT OF BEGINNING**; thence along a line that is 111.99 feet northwest of and parallel to the east line of said Lot 1, South 24°41'21" West, a distance of 10.00 feet; thence along a line that is 25.00 feet southwest of and parallel to north line of said Lot 2, North 65°18'39" West a distance of 10.00 feet; thence along a line that is 121.99 feet northwest of and parallel to the east line of said Lot 1, North 24°41'21" East a distance of 10.00 feet; thence along a line that is 15.00 feet southwest of and parallel to the north line of said Lot 2, South 65°18'39" East a distance of 10.00 to the **POINT OF BEGINNING**.

The above-described lands contain 100 SQFT or 0.002 Acres ±

Legal Description Parcel 20-020-145 (Access Area)

A strip of land 10 feet wide being a portion of Lot 2 of Greenbriar - Phase One, as recorded in Plat Book 67, Page 25 of the Public Records of Polk County, Florida, lying and being in Section 35, Township 29 South, Range 27 East, Polk County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Lot 2 of Greenbriar - Phase One, Recorded in Plat Book 67 Page 25, of the Public Records of Polk County, Florida, said point being on the south line of Greenbrough Drive, a 50 foot right of way per said Greenbriar - Phase one, thence along the north line of said Lot 2 of Greenbriar - Phase One, South 65°18'39" East (Being the basis of bearings for this description) a distance of 56.66 feet, for a **POINT OF BEGINNING**; thence continue along said north line of said Lot 2 of Greenbriar - Phase One, South 65°18'39" East a distance of 10.00 feet, thence departing said north line, and along a line that is 81.99 feet northwest of and parallel to the east line of Lot 1 of said Greenbriar - Phase One, South 24°41'21" West, a distance of 25.00 feet; thence along a line that is 25.00 feet southwest of and parallel to the north line of said Lot 2, North 65°18'39" West, a distance of 30.00 feet; thence along a line that is 111.99 feet northwest of and parallel to the east line of said Lot 1, North 24°41'21" East a distance of 10.00 feet; thence along a line that is 15.00 feet southwest of and parallel to the north line of said Lot 2, South 65°18'39" East a distance of 20.00, thence along a line that is 91.99 feet northwest of and parallel to the east line of Lot 1 of said Greenbriar - Phase One, North 24°41'21" East, a distance of 15.00 feet; to the **POINT OF BEGINNING**.

The above-described lands contain 450 SQFT or 0.010 Acres ±

Page 4 of 5

North Lake Wales Data Collection Site
SWF Parcel No. 20-020-145

Attachment 2

Graphic Presentation

of
Proposed parcel 20-020-145
Section 35, Township 29 South, Range 27 East
Polk County, Florida.



Not to Scale



Attachment 3

HYDROGEOLOGY FIELD LOG						
Page: 1 of 3						
Site Name:		North Lake Wales				
Geologist:		K. Mallams				
Date (MM/DD/YYYY)	Geology	Hydrostratigraphy	Depth (feet bls)	Lithologic Description	SPT Blow Counts	Comments
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	0-1	SAND - light brown (5YR 5/6); angular to subangular; not well sorted; coarse to medium grained; 15 percent organics; unconsolidated		posthole dig samples
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	1-2	SAND - light brown (5YR 5/6); subrounded to subangular; not well sorted; coarse to medium grained; 5 percent organics; unconsolidated		posthole dig samples
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	2-3	SAND - dark yellowish orange (10YR 6/6); subangular to subrounded; coarse to medium grained; unconsolidated; 5 percent organics		posthole dig samples
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	3-4	SAND - dark yellowish orange (10YR 6/6); subrounded; not well sorted; coarse to medium grained; 3 percent organics; unconsolidated		posthole dig samples
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	4-8	no samples		
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	8-10	SAND - grayish orange (10YR 7/4); pale yellowish orange (10YR 8/6); subrounded; not well sorted; coarse to medium grained; 3 percent organics; unconsolidated	4,5,6,8	
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	10-13	DRILL		
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	13-15	SAND - grayish orange (10YR 7/4); subrounded; well sorted; medium-grained; 3 percent organics; unconsolidated	3,5,7,7	
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	15-18	DRILL		

[bls, below land surface; MM/DD/YYYY, month/day/year; SPT, standard penetration test]

Attachment 3

HYDROGEOLOGY FIELD LOG						
Page: 2 of 3						
Site Name:		North Lake Wales				
Geologist:		K. Mallams				
Date (MM/DD/YYYY)	Geology	Hydrostratigraphy	Depth (feet bls)	Lithologic Description	SPT Blow Counts	Comments
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	18-20	SAND - grayish orange (10YR 7/4); subrounded; not well sorted; medium-grained; 3 percent phosphate?; unconsolidated	3,5,8,11	
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	20-23	DRILL		Water table about 22 feet
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	23-25	SAND - very pale orange (10YR 8/2); subrounded; semi well sorted; medium-grained; 3 percent phosphate?; unconsolidated	5,6,7,8	
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	25-28	DRILL		
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	28-30	SAND - very pale orange (10YR 8/2); subrounded	5,6,8,8	
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	30-33	DRILL		
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	33-35		6,6,6,6	
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	35-38	DRILL		
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	38-40		8,8,14,16	

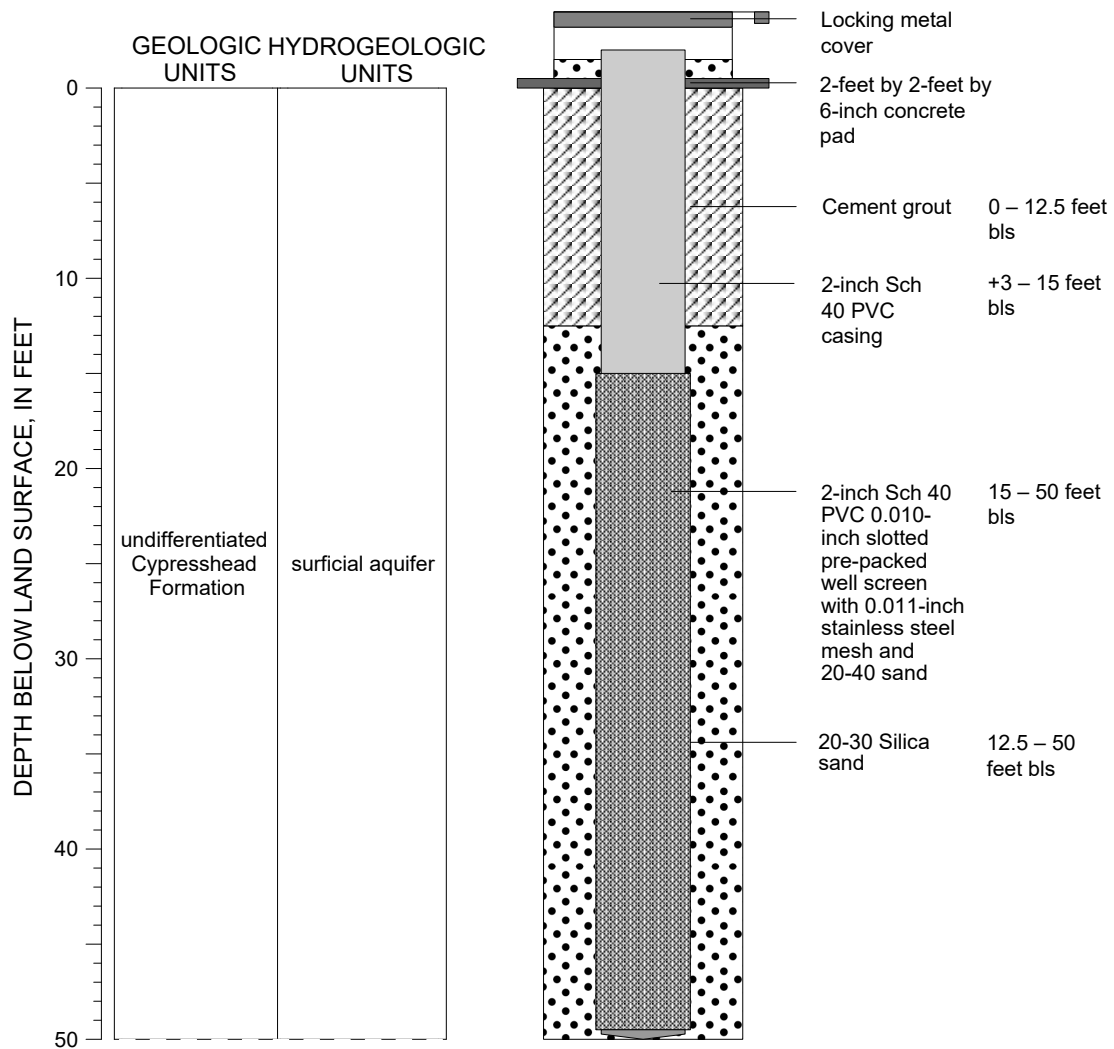
[bls, below land surface; MM/DD/YYYY, month/day/year; SPT, standard penetration test]

Attachment 3

HYDROGEOLOGY FIELD LOG						
Page: 2 of 3						
Site Name:		North Lake Wales				
Geologist:		K. Mallams				
Date (MM/DD/YYYY)	Geology	Hydrostratigraphy	Depth (feet bls)	Lithologic Description	SPT Blow Counts	Comments
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	40-43	DRILL		
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	43-45		6,11,12,14	
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	45-48	DRILL		
09/04/2024	undifferentiated Cypresshead Formation	surficial aquifer	48-50		8,10,15,18	

[bls, below land surface; MM/DD/YYYY, month/day/year; SPT, standard penetration test]

Attachment 4



Well Name:	North Lake Wales Surf Aq Monitor
SID:	1029695
WCP:	946231
S/T/R:	S35/T29S/R27E
Latitude:	27° 54' 39.71" N
Longitude:	81° 34' 49.51" W
Reporting Category:	NOLW
Const. Began:	09/04/2024
Const. Complete:	09/23/2024

EXPLANATION	
	20-30 sand
	Concrete
	Cement grout
	PVC casing
	Pre-packed screen
	Well cover
	Nose cone

Note: As-built is not to scale above land surface.

[Aq, aquifer; bls, below land surface; Const., construction; N, north; PVC, polyvinyl chloride; Sch, schedule; SID, station identification; S/T/R, Section/Township/Range; Surf, surficial; WCP, well construction permit; W, west]

Attachment 5

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT GEOHYDROLOGIC DATA SECTION DAILY CORE DRILLING LOG

Report	Site Geologist	Date	Start Date	Site Identification
2	K. Mallams	09/04/2024	09/03/2024	102695
Contractor	Crew	Proposed Total Depth	Progress	Depth
NET Drilling	Bill, Tim	50 feet	50 feet	50 feet
Well Site Number/ Name	North Lake Wales	Well Name	North Lake Wales Surf Aq Monitor	
Time Log				
From	To	Depth	Details of Operations	
0830			KDM arrive	
0800			Leonard arrived. Drillers arrived before Leonard got here.	
			Drillers using our black mats (14 quantity) so rig doesn't sink in sand	
0840			Backing rig to hole. Preparing to sample.	
0855			Mast up	
0900		0-4	Post hole digger samples	
0920			Pushing in temp casing (about 5 feet), mixing mud	
0945		4-8	Drill hole may be crooked	
0952		8-10	Sample SPT (4,5,6,8) 23	
0957		10-13	Drill	
1000		13-15	Sample SPT (3,5,7,7) 22	
1002		15-18	Drill	
1010		18-20	Sample SPT (3,5,8,11) 26	
1014		20-23	Drill, 22 feet water table	
1018			Cleaning sand out of mud pit	
1030		23-25	Sample SPT (5,6,7,8) 26	
1035		25-28	Drill	
1041		28-30	Sample SPT (5,6,8,8) 28	
1043		30-33	Drill	
1052		33-35	Sample SPT (6,6,6,6) 23	
1100		35-38	Drill	
1104		38-40	Sample SPT (8,8,14,16) 48	
1110		40-43	Drill	
1115		43-45	Sample SPT (6,11,12,14) 45	
1121		45-48	Drill	
1130		48-50	Sample SPT (8,10,15,18) 51	
District Representative		Contractor Representative		

Attachment 5

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT GEOHYDROLOGIC DATA SECTION DAILY CORE DRILLING LOG

Report	Site Geologist	Date	Start Date	Site Identification
2 continued	K. Mallams	09/04/2024	09/03/2024	102695
Contractor	Crew	Proposed Total Depth	Progress	Depth
NET Drilling	Bill, Tim	50 feet	0 feet	50 feet
Well Site Number/ Name	North Lake Wales	Well Name	North Lake Wales Surf Aq Monitor	
Time Log				
From	To	Depth	Details of Operations	
1145			Rig shut off	
			Lunch	
1245			Rig started	
1300			Drill with Hollow Stem Augers; 10 total; 6-inch OD by 4-inch ID by 5 feet	
1305			Drill number 2	
1309			Drill number 3	
1311			Drill number 4	
1313			Drill number 5	
1315			Drill number 6	
1318			Drill number 7	
1321			Drill number 8	
1324			Drill number 9	
1327			Drill number 10	
1335			Install PVC casing 35 feet (7 by 5 feet); Screen 15 feet (1 by 5 feet plus	
			1 by 10 feet)	
			No stick up	
1340			Sand came through augers to approximately 8 feet from bottom	
			well stuck	
1400			Took off top 5 feet flight	
			Took off to 10 feet PVC	
1415			Thunderstorm	
1445			Done for the day – too much lightning and one of the drillers is sick	
			Left 8 augers in hole – open 10 feet at bottom – most likely filled in	
1500			All parties depart for the day	
District Representative		Contractor Representative		

Attachment 5

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT GEOHYDROLOGIC DATA SECTION DAILY CORE DRILLING LOG

Report	Site Geologist	Date	Start Date	Site Identification
3	K. Mallams	09/23/2024	09/03/2024	102695
Contractor	Crew	Proposed Total Depth	Progress	Depth
NET Drilling	Bill, Tim	50 feet	0 feet	50 feet
Well Site Number/ Name	North Lake Wales	Well Name	North Lake Wales Surf Aq Monitor	
Time Log				
From	To	Depth	Details of Operations	
940	945		TL on site. NET already on site.	
945			City employee unlocked gate.	
	1015		Set up CME drill rig.	
1015			Auger from land surface to 5 feet using 4¼-inch augers.	
	1115		Add 30 gallons bentonite slurry inside augers.	
1115			Run tremie inside augers.	
			Flush augers with water to remove bentonite slurry.	
			Install 2-inch screen well, Sch 40 PVC (pre-packed) 0.010-inch	
			slot screen – 15 feet to 50 feet.	
			Casing – 3 feet above land surface to 15 feet.	
			15 bags 20/30 sand – 12.5 feet to 50 feet.	
	1315		3.5 bags cement – land surface to 12.5 feet.	
1315			Lower mast. Move rig. Clean up.	
	1430		Install well cover and concrete pad.	
1430			Develop well with battery pump at 5 gallons every 6 minutes.	
			Static – 23.08 feet below top of casing	
			Drawdown – 23.30 feet below top of casing	
	1515		Top of casing 3 feet above land surface.	
1515	1530		End development. Everyone off site.	
District Representative	Tim Lohner	Contractor Representative		