

Groundwater Monitoring in the St. Johns River Water Management District

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INTRODUCTION

Groundwater is the source for over 97% of the public and domestic drinking water supplies in SJRWMD. In addition, over 73% of industrial/commercial and 66% of agricultural water needs are supplied by groundwater sources. The 2000 *District Water Supply Plan* indicates that the population within SJRWMD is projected to increase by about 50%, to nearly 5.2 million, by the year 2020. Total water demand is projected to increase about 35% by 2020, to nearly 1.85 billion gallons per day (Vergara 2000).

As the demands on water resources increase, it is important to have an ongoing program to provide the data and information needed to assess groundwater level and quality conditions and understand what information can be obtained from groundwater monitoring. Existing and anticipated sources of groundwater may not be adequate to supply water for all existing and future needs through 2020 without causing unacceptable impacts to water resources and related natural systems. Potential impacts include declines in groundwater levels and quality, reduction in spring discharge, increases in seawater intrusion, harm to native vegetation and wetlands, and interference with existing legal users.

Projections of future water resource conditions were developed with modeling techniques that used the best information available. The accuracy of the model projections can be improved in areas where there is currently a lack of data. As a result, improved groundwater monitoring well networks were devised, addressing both regional and subregional data needed for long-term water supply planning and water resource protection. Data obtained from the well networks increase our understanding of the hydrogeologic, climatic, and human factors that affect water resources, and this information is used to assess the effectiveness of water management programs.

GROUNDWATER MONITORING

Groundwater monitoring is administered in the Division of Groundwater Programs (GWP) through the Water Resources Assessment section, a Field Services (well construction) section, and a Geophysical Logging section. The Division of Hydrologic Data Services is responsible for data collection from the network wells.

The objectives of the Water Resources Assessment section are to:

- Design, construct, and maintain water level and water quality monitoring well networks
- Evaluate and refine the networks to optimize the spatial and temporal data collection
- Evaluate and analyze the data collected from the networks using statistical, geostatistical, graphical, and mapping methods to produce useful information
- Assess the effectiveness of the information derived from the networks to meet current and future water management needs
- Distribute and publish the network data, information, and interpretations as required by users for water supply planning, minimum flows and levels, consumptive use permitting, and other District programs

GROUNDWATER MONITORING DESIGN

Starting in the mid-1980's, the design of monitoring networks has been quantified into a Monitoring Information System methodology. Ward et al. (1990) listed five generalized steps required for designing monitoring information systems:

1. Define information needs of management and projects,
2. Define information that can be produced by monitoring,
3. Design monitoring network,
4. Document data collection procedures, and
5. Document information-generating and reporting procedures.

The design, implementation, and periodic re-evaluation of the District's groundwater monitoring networks follows these generalized steps.

Network Design Theory

Groundwater network design theory holds that there are four basic types of networks:

1. Regional
2. Subregional
3. Natural Baseline
4. Projects

Each of the four network types can have one or more objectives and each results in distinct products. The regional networks are designed to measure changes in the aquifer systems caused by human actions or long-term climatic variation, generally over broad areas. Products from regional networks include regional maps, regional change maps, and individual time-series graphs and analyses.

Subregional networks are designed to measure changes in the aquifer systems caused by water withdrawals by well fields. Products from subregional networks include small-scale maps, change maps, time-series graphs and comparison of changes in the aquifer systems within the well field. Natural baseline networks quantify the impact of natural changes on the aquifer system. Products from Natural baseline networks include time-series graphs and analyses. Project networks are primarily driven by individual studies. Within the District those studies are primarily groundwater modeling projects.

District's Network Design

The District's groundwater networks are designed to provide information for one of two basic network types:

- 1) Regional
 - a) Regional
 - b) Natural Baseline
- 2) Projects
 - a) Groundwater Model
 - b) Other

The regional network wells are the District's permanent backbone wells. The natural baseline network is a subset of the regional network. Project network wells are those solely utilized to measure changes in the aquifer systems on smaller scales than the regional network for District projects. Wells included in this network are primarily driven by individual groundwater models to calibrate models (92% of project wells; Sep 2003). In the other networks subset of the projects network are wells and springs required to meet legal requirements (5% of project wells; Sep 2003), Consumptive Use Permitting (CUP) compliance monitoring (2% of project wells; Sep 2003) or other non-modeling projects (1% of project wells; Sep 2003).

Due to the differing objectives, each type of groundwater level network must be defined more or less independently of the others. **However, wells used in one network are used in another, where appropriate, and in fact most wells are used in more than one network.** Osburn (2000) describes each of the network types, their products, and the analysis methodology in greater detail.

CURRENT GROUNDWATER NETWORKS

To improve the effectiveness of the SJRWMD water level and quality networks, GWP staff evaluated data collection in the Floridan, intermediate, and surficial aquifers. This evaluation resulted in the elimination of redundant wells and freed financial and human resources for adding wells where needed. Current groundwater monitoring is focused on the Floridan aquifer system, since this aquifer is the primary groundwater source for all uses. The water level and water quality networks as of September 2003 are described below. The numbers of wells and springs in each network are summarized in Table 1. Details of the wells in the networks are listed in Appendix B Table 1. Wells used in the Baseline network are used in the Regional network and are not counted in the grand totals in Table 1. Project networks wells and springs tabulated in Table 1 are exclusively used by that network.

Regional Networks

Upper Floridan Aquifer Potentiometric

Water level data from this regional network subset provides information to assess the status of storage at the time of measurement, to determine the direction of water movement, to detect changes in water levels over time, and to provide early warnings of potential water quality problems due to groundwater withdrawals or climatic conditions. A map of the wells in the Upper Floridan aquifer potentiometric subset is provided in Appendix A, Figure 1.

Osburn (2000) evaluated the effectiveness of the Upper Floridan aquifer potentiometric network. This network measures water levels semi-annually in May and September, with historical data since 1975. The study examined the well construction and use attributes of the network wells, the areal coverage and temporal suitability of the measurements, and the spatial effectiveness of the network. The spatial effectiveness was evaluated using a geostatistical analysis of May 1995 water levels. This analysis concluded that at least one well be measured in each grid cell of a 45,000-foot hexagonal grid network to optimally assess regional water levels in the Upper Floridan aquifer. This network will require a total of 341 wells. As of September 2003, there are 23 grids identified as high priority for drilling new wells to add to the network. An additional 46 grid cells have a low priority for new wells. Once the empty grid cells are filled, the network reaches maintenance status and only wells needed to repair or replace existing wells are need. There are approximately 105 wells that are not dedicated monitor wells, or are privately owned, and will need to be replaced over the next five to 10 years.

Table 1. Summary of Groundwater Monitoring Networks by type.				
Network	Water Level	Water Quality	Discharge	
Regional				
Wells				
Surficial	91	3	-	
Intermediate	46	2	-	
<i>Upper Floridan</i>	325	177	-	
Lower Floridan	24	6	-	
Springs				
Surficial	1	-	1	
Intermediate	-	-	-	
<i>Upper Floridan</i>	11	18	18	
Natural Baseline Network				
Wells				
Surficial	23	-	-	
Intermediate	12	1	-	
<i>Upper Floridan</i>	48	37	-	
Lower Floridan	4	3	-	
Springs				
Surficial	-	-	1	
Intermediate	-	6	6	
<i>Upper Floridan</i>	-	-	1	
Projects Network				
Wells				
Surficial	96	4	-	
Intermediate	30	5	-	
<i>Upper Floridan</i>	120	86	-	
Lower Floridan	6	19	-	
Springs				
Surficial	-	-	-	
Intermediate	-	-	-	
<i>Upper Floridan</i>	4	3	6	
Totals ¹	754	323	25	

1: Baseline Network numbers are not included in the totals as they are also counted in the Regional Network

Upper Floridan Aquifer Water Quality

Water quality data from this network provides information to evaluate groundwater conditions on regional scales to detect long-term trends, to identify potential problem areas, and to assess whether the water quality in an area is suitable for the intended water use. A map of the wells in the Upper Floridan aquifer water quality network is provided in Appendix A, Figure 2. Some of the network sites have additional wells monitoring the middle and lower parts of the Floridan aquifer system, allowing for an evaluation of water quality changes with depth.

Boniol (2002) described current water quality conditions in the Upper Floridan aquifer and proposed a regional network design for water quality monitoring of the Upper Floridan aquifer. The spatial variability of chloride concentration data was analyzed geostatistically to determine that at least one well be sampled in each grid cell of a 50,000-foot hexagonal grid network to adequately assess regional, baseline water quality conditions. To increase the effectiveness of the regional network, 24 empty grid cells have been identified for additional wells bringing the total grid cells needed to 197. Once the empty grid cells are filled the network reaches maintenance status and only wells needed to repair or replace existing wells are needed.

To determine the required frequency of water quality sampling, trend analysis of existing data was used to determine the temporal variability of existing water quality data. Statistical analyses were then used to determine the significance of an apparent trend in water quality at a specific well location and to estimate the magnitude of that trend. The goal was to estimate the sampling frequency that would be required to detect a statistically significant trend of chloride concentrations at the 80% confidence level over five years. Thus, it will take a minimum of 5 years of additional data collection at the established sampling frequency to statistically determine if a trend exists.

While Boniol (2000) determined that most of the District's regional water quality network could be adequately monitored with the one well per 50,000-foot hexagon grid system, there were areas where this network was not adequate. These areas of critical concern included

- Areas of seawater intrusion into freshwater zones along parts of the Atlantic Coast
- Areas where underlying water with high chloride, sulfate, and TDS concentrations mix with fresh groundwater along parts of the St. Johns River.

- Areas with significantly increasing chloride concentrations in groundwater
- The interface between potable and nonpotable water
- Areas in the Upper Floridan aquifer with projects water level draw downs of greater than 3 ft by the year 2020

In the areas of critical concern up to 2 monitor wells per hexagon will be required. As these areas expand and contract over the years additional wells may be needed depending on those changes.

Lower Floridan Aquifer Water Level and Quality

The Lower Floridan aquifer provides water for public supply in Duval, central Orange, and southern Seminole counties. Additional information about the hydrogeologic characteristics of the Lower Floridan aquifer is needed to better understand its relationship to upper parts of the Floridan aquifer and to assess its potential use as a source of public supply water in these and other areas. GWP evaluated existing Lower Floridan aquifer wells and monitoring efforts, and proposed 32 areas for drilling new wells. The numbers of Lower Florida aquifer wells in each network is summarized in Table 1. A map of wells in the current regional Lower Floridan network is provided in Appendix A, Figure 3. Since the lower Floridan aquifer is the least understood at this time no network analysis can be undertaken for at least 7 to 10 years.

Surficial Aquifer

The surficial aquifer system is a source of water for public supply in St. Johns, Flagler, Brevard, and Indian River counties where water in the Floridan aquifer does not meet drinking water standards, and is also used for domestic self-supply. Surficial aquifer monitoring wells have been constructed as part of a cluster with Floridan and intermediate aquifer wells at almost all new wells sites over the past several years. Where surficial aquifer wells are co-located with regional or natural baseline Floridan aquifer wells, they are part of these networks. The numbers of surficial aquifer wells in each network is summarized in Table 1.

As a standard practice, water level and quality data are collected for at least the first two years for new surficial aquifer wells, and then project managers determine the status of any future monitoring.

In addition to water level and quality data, surficial wells provide information for identifying potential impacts to wetlands and other water resources due to water withdrawals, mapping water table elevations for use in groundwater models, and monitoring the potential for water quality degradation due to point and nonpoint sources of contamination. While a detailed geostatistical analysis of the current surficial monitoring has not been performed, GWP staff is currently investigating methods to devise an effective surficial aquifer network to provide the information needed for water supply planning models.

Intermediate Aquifer

The intermediate aquifer is a source of water for domestic self-supply in Duval, Clay, and Orange counties, and locally in other areas of the District. Intermediate aquifer monitoring wells have been drilled in clusters with surficial and Floridan aquifer wells, providing data for evaluating water level and quality relationships among the aquifer systems. Where intermediate aquifer wells are co-located with regional or natural baseline Floridan aquifer wells they are part of these networks. The numbers of intermediate aquifer wells in each network is summarized in Table 1.

There is no network analysis planned for the intermediate aquifer due to its limited use.

Springs

The numbers and locations of springs being monitored for discharge and water quality by Groundwater Programs as part of its regional, baseline, and groundwater modeling networks are summarized in Table 1 and located in Appendix A, Figure 4. No changes in the regional or baseline networks is predicted.

Natural Baseline Network

The natural baseline network quantifies the impact of natural changes on the aquifer systems. The wells and springs making up this network are in areas where anthropogenic effects are considered minimal. In the District's network these wells and springs are a subset of the regional network. The numbers of wells and springs by aquifer in the baseline network are summarized in Table 1 and the locations shown in Appendix A, Figure 5.

Projects Networks

The District's projects network is composed of groundwater modeling, and other networks as previously discussed. The numbers are listed in Table 1. Wells

measured exclusively for the projects network are not included in either the regional or baseline networks.

Groundwater Modeling Network

The groundwater modeling networks provide data to meet groundwater modeling needs. Most of the projects network wells are for groundwater modeling purposes (92%; Sep 2003). The locations of the wells and springs are included in Appendix A, Figure 6. At this time (Sep 2003) the District has 5 groundwater model projects. Their domains are shown in Figure 1.

Included in the groundwater modeling network are 58 wells where the water levels are measured by the U.S. Geological Survey in Camden and Charlton counties, Georgia in May and September of each year. Seven of these wells are sampled twice a year for water quality.

Other Networks

The other subset of the projects network is composed of a small number of wells (8% of the projects network) required for legal purposes, CUP compliance, and Water Supply Management (WSM) monitoring.

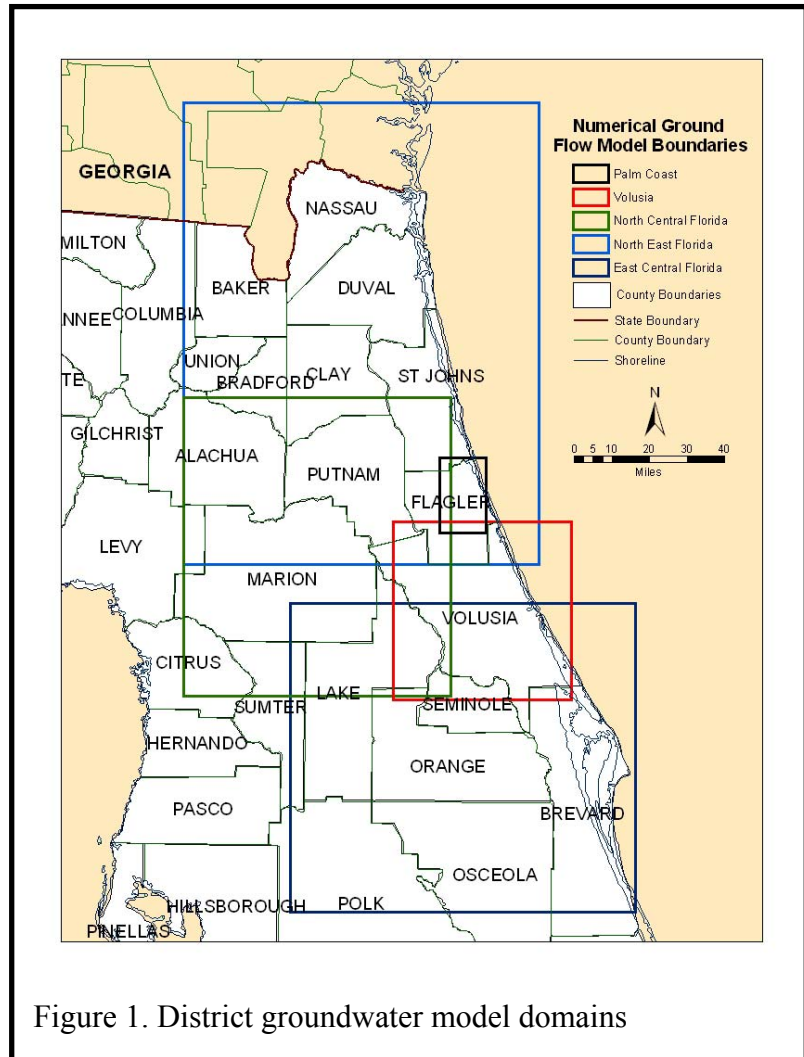


Figure 1. District groundwater model domains

The District is required to monitor 18 wells due to legislative mandate or other legal agreements. Legislation was passed in 1995 requiring the District to design and implement a network to determine, monitor and evaluate the freshwater/saltwater interface of the Geneva Freshwater Lens in eastern

Seminole County. Other groundwater monitoring was required by the mediation agreement approved by the Governing Board in February 1998 for lakes Broward, Daugharty, Como, and Winona.

CUP compliance is monitoring water levels in 7 wells for cumulative water use impacts. One is in Duval and the remainder in NW Volusia County (6 wells). Four wells are monitored for water quality in Indian River, Osceola, and Putnam counties for WSM projects.

SUMMARY

The goal of the SJRWMD water level and quality monitoring networks is to produce useful information for a variety of District needs. The information produced by the well networks is used in a wide range of applications by SJRWMD staff, state and local government agencies, public supply utilities, private consulting firms, and well drillers. Sharing data and information produced from the monitoring networks with various groups helps to educate the public about water resources, involves the public in protecting these resources, and develops the partnerships needed to accomplish the SJRWMD mission. The regional and baseline network wells are statistically “re-evaluated” about every 5 years to insure technical and cost effectiveness. The ground water modeling networks are evaluated yearly.

REFERENCES

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Appendix A.
**Figures of the locations of the groundwater monitoring
network wells and springs.**

Figure 1. Upper Floridan aquifer potentiometric wells

Figure 2. Regional and Projects Upper Floridan aquifer water quality wells

Figure 3. Lower Floridan aquifer wells

Figure 4. Regional and Projects Spring Network

Figure 5. Natural Baseline network

Figure 6. Projects network

Regional Upper Floridan Aquifer Potentiometric Network

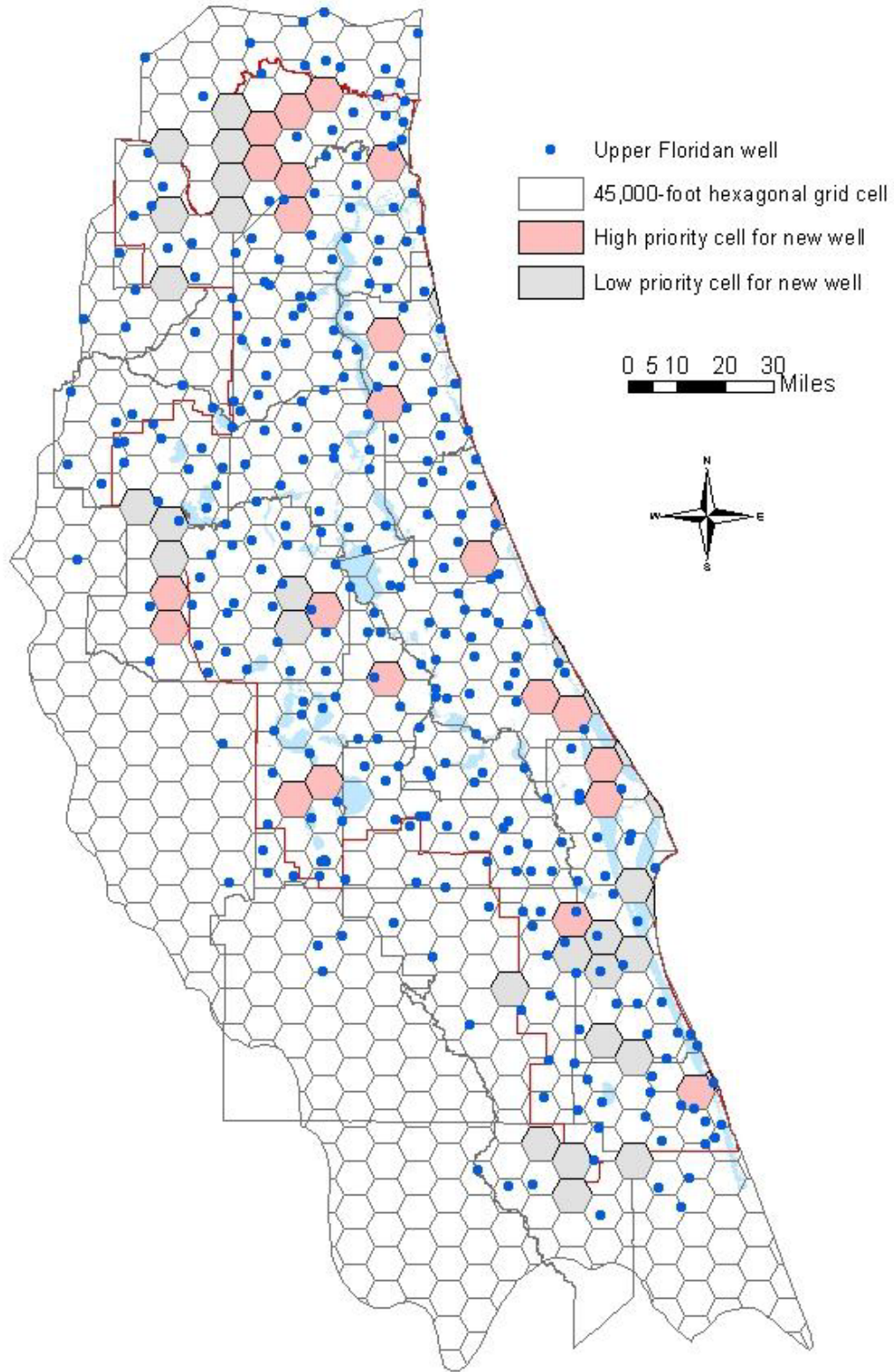


Figure 1. Upper Floridan aquifer potentiometric network

Regional and Project Upper Floridan Aquifer Water Quality Network

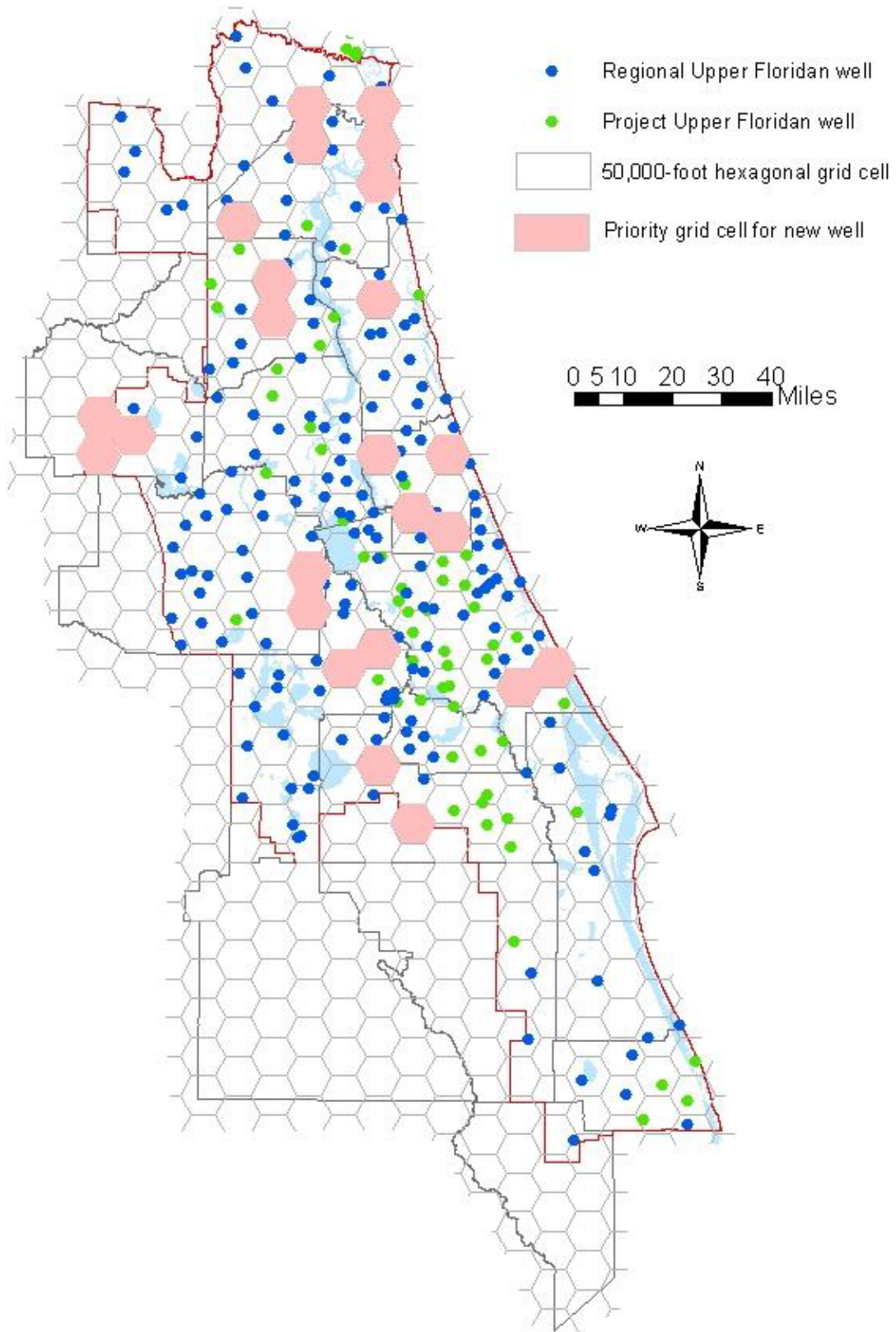


Figure 2. Regional and Projects Upper Floridan aquifer water quality network

Regional Lower Floridan Aquifer Network

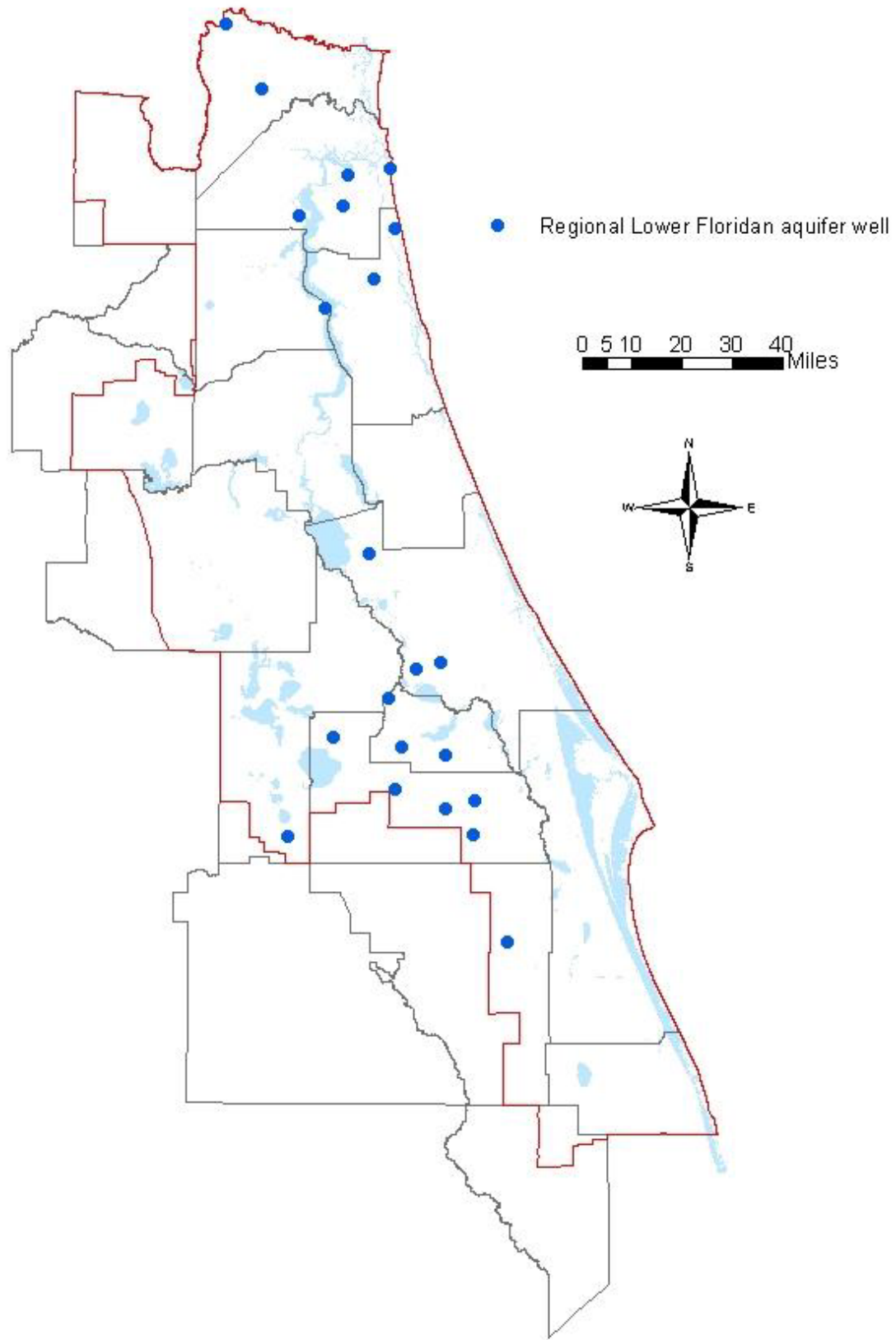


Figure 3. Regional Lower Floridan aquifer network

Regional and Projects Spring Network

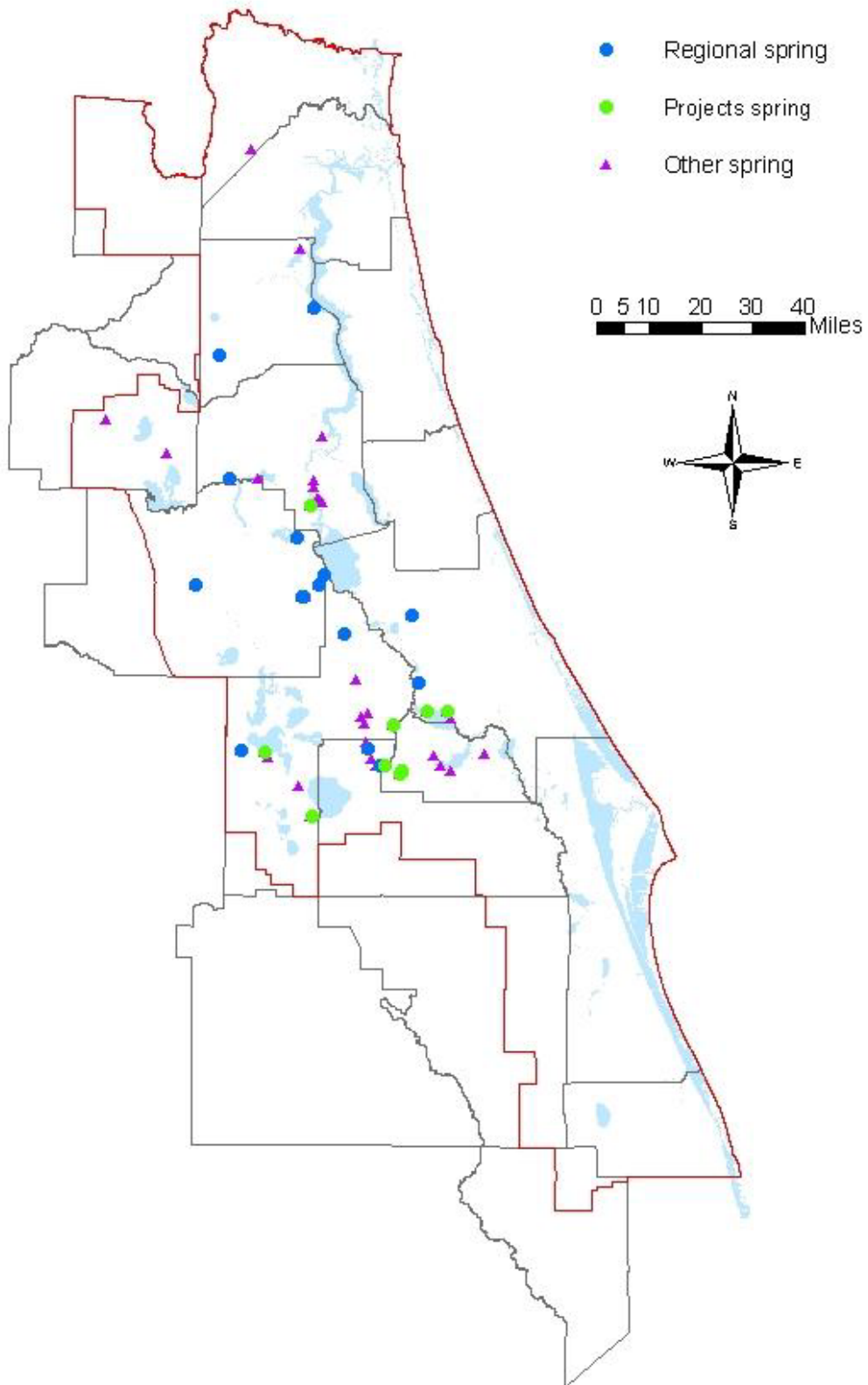


Figure 4. Regional and Projects Spring network

Natural Baseline Network

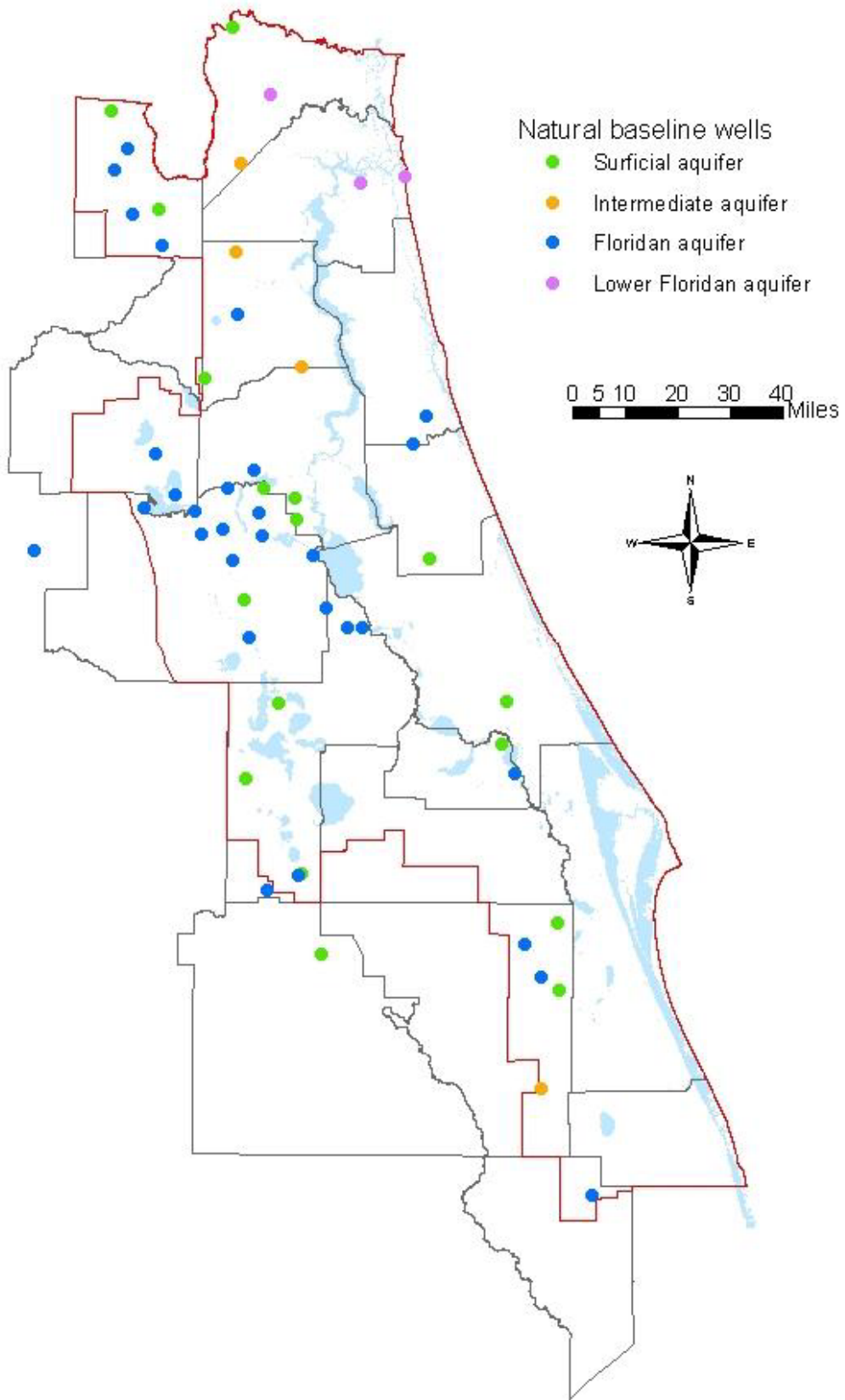


Figure 5. Natural Baseline Network

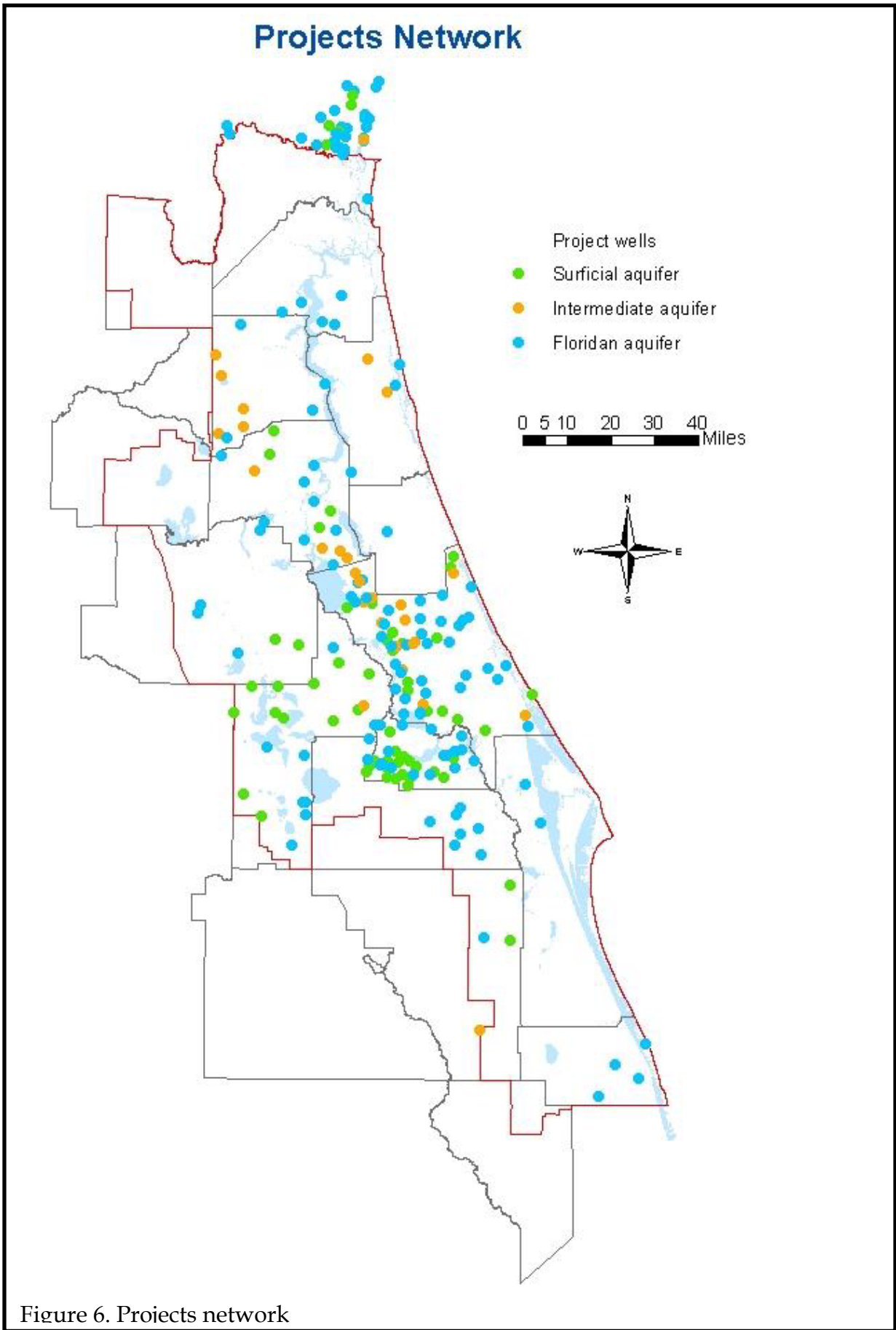


Figure 6. Projects network

Appendix B.

Summary table of the groundwater monitoring network.

Table Legend		
Network Base Category	Model	Network
Central Florida Discharge	East Central Florida	Projects
Central Florida Level	East Central Florida	Projects
Central Florida Quality	East Central Florida	Projects
Consent Agreement Level		Projects
CUP Level		Projects
Legislative Mandate Level		Projects
Legislative Mandate Quality		Projects
Natural Baseline Level		Natural Baseline
Natural Baseline Quality		Natural Baseline
Natural Baseline Quality		Natural Baseline
NC Florida Level	North Central	Projects
NE Florida Discharge	NE Florida	Projects
NE Florida Level	NE Florida	Projects
NE Florida Quality	NE Florida	Projects
Regional Level		Regional
Regional Quality		Regional
Regional Quality		Regional
Regional Semiannual Level		Regional
Volusia Discharge	Volusia	Projects
Volusia Level	Volusia	Projects
Volusia Quality	Volusia	Projects
WSM - Toth - Quality		Projects

The numbers in the columns refer to number of annual measurements being made at each site.

SN	Site Name	Aquifer	Central Florida Discharge	Central Florida Level	Central Florida Quality	Consent Agreement Lvl	CUP Level	Legislative Mandate Lvl	Legislative Mandate Quality	Natural Baseline Level	Natural Baseline Quality	Natural Baseline Quality	NC Florida Level	NE Florida Discharge	NE Florida Level	NE Florida Quality	Regional Level	Regional Quality	Regional Quality	Regional Semiannual Level	Volusia Discharge	Volusia Level	Volusia Quality	WSM - Toth - Quality
33F002	UNION CARBIDE 2	Surficial													2									
33F003	UNION CARBIDE 3	Floridan													2									
33F004	UNION CARBIDE 1	Floridan													2									
34D008	KBMP NO. 2	Floridan													2									
34E001	CUMBERLAND ISL GGS TW 01	Floridan													2					2				
34E003	CUMBERLAND ISL GREYFIELD 02	Floridan													365									
34E010	ROCKEFELLA CUMB ISL NO 32	Floridan													2									
34E011	NPS PLUM ORCHARD	Floridan													2									
34E012	REDDICK	Floridan													2									
34E013	YANKEE PARADISE TRAIL WELL	Floridan													2									
34E014	FOSTER	Floridan													2									
34E015	MISSOE	Intermediate													2									
34F009	BACON, MR.	Floridan													2									
34F010	GENERALS MOUND	Floridan													2									
34F011	PLATT, MR.	Floridan													2									
34F012	Mr Pomroy in Camden County GA	Floridan													2									
A-0002	HIGH SPRINGS	Floridan																						
A-0004	ALTO STRAUGHN FLORIDAN	Floridan Unconfined																						
A-0005	OWENS-ILLINOIS #1	Floridan								12							12							
A-0016	RUB MON 1 NR GAINESVILLE	Floridan															12							
A-0035	BUD THOMAS	Floridan																						
A-0038	DRISCOLL	Floridan																						
A-0056	DEERHAVEN POWER PLANT	Floridan																						
A-0068	USGS (83623601 10S17E22 CE-1A)	Floridan																						
A-0071	HAWTHORNE DEEP	Floridan															12		1					
A-0075	DNR - SAN FELASCO	Floridan																						
A-0135	Karen Newman (alias A.L. Moore)	Floridan																						
A-0436	HAWTHORNE TOWER	Surficial																	12					
A-0693	ALACHUA COUNTY FG	Floridan																	365		1			
A-0702	ALACHUA COUNTY FG	Surficial																	365					
A-0706	ALACHUA COUNTY F-3 NR GAINESVILLE	Floridan													12									
A-0708	ALACHUA COUNTY F-5 NR HAWTHORNE	Floridan																						
A-0712	VISA #2 NR GAINESVILLE	Floridan																						
A-0713	VISA #3 NR GAINESVILLE	Floridan																						
A-0725	ORANGE LAKE WEATHER STATION NR	Floridan								12		1									1			
B-0007	LOUIS HILL FIRE TWR	Floridan																						
B-0010	HIGHWAY 229 - RAIFORD C	Floridan																						
B-0012	USGS - GRAHAM	Floridan																						
BA0005	UNDETERMINED	Floridan																						
BA0009	TAYLOR AT SR250 & SR125 (GS# B-9)	Floridan								12		1							12		1			
BA0011	USGS B-11	Floridan								12									12					
BA0015	OCEAN POND	Floridan																						
BA0018	ONF #6 FLORIDAN	Floridan								12		1							12		1			
BA0019	MANNING	Floridan								12														
BA0054	MACCLENNY FIRETOWER	Floridan								365		1			365				365		1			
BA0055	MACCLENNY FIRETOWER	Intermediate								365					365				365					
BA0056	MACCLENNY FIRETOWER	Surficial								365					365				365					
BA0057	EDDY FIRETOWER	Floridan								365		1			365				365		1			
BA0058	EDDY FIRETOWER	Intermediate								365					365				365					
BA0059	EDDY FIRETOWER	Surficial								365					365				365					
BA0107	City of MacClemey	Floridan																			1			
BR0001	TITUSVILLE	Floridan																						
BR0019	TEN MILE RANCH NR KENAN	Floridan																						
BR0036	754031001 29638E34 343 GRANT COUNTY PARK	Floridan																						
BR0074	BR-74 USGS	Floridan																						
BR0107	754028002	Floridan																						
BR0208	JETTY PARK	Floridan																						
BR0288	754037007 29537E04 232	Floridan																						
BR0299	814039076 28536E06 444	Floridan																						
BR0341	800034072 28S37E36 424	Floridan																						
BR0424	759039005 28S37E06 322	Floridan																						
BR0585	ASTRONAUT HIGHHOOL AT MIMS FL	Floridan																			365			
BR0586	Tico Airport	Floridan																			12			
BR0608	NASA NR GATE #2	Floridan				2															12			
BR0624	SEBASTIAN STATE PARK 65	Floridan																			365			
BR0625	SEBASTIAN STATE PARK 45	Floridan																			365			
BR0645	PLATT NR MELBOURNE	Floridan																			12			
BR1050	838042002 21S36E27 MERRI	Floridan																						
BR1444	DAN PLATT SARNO RD REPLA	Floridan																						
BR1469	ASTRONAUT HIGHHOOL AT MIMS FL	Surficial																			365			
BR1526	SEMINOLE RANCH	Floridan																			12			
BR1549	COCOA HIGH 70 FT AT COCOA FL	Intermediate																			365			
BR1550	COCOA HIGH 30 FT AT COCOA	Surficial																			12			
BR1557	COCOA HIGHHOOL AT COCOA FL	Floridan																			365			
BR1558	KENNEDY MIDDLEHOOL DEP	Floridan																			12			

SN	Site Name	Aquifer	Central Florida Discharge	Central Florida Level	Central Florida Quality	Consent Agreement Lvl	CUP Level	Legislative Mandate Lvl	Legislative Mandate Quality	Natural Baseline Level	Natural Baseline Quality	Natural Baseline Quality	NC Florida Level	NE Florida Discharge	NE Florida Level	NE Florida Quality	Regional Level	Regional Quality	Regional Quality	Regional Semiannual Level	Volusia Discharge	Volusia Level	Volusia Quality	WSM - Toth - Quality
BR1559	ST SEBASTIAN RIVER BUFFER PRES	Floridan																	2	2				
BR1572	ASTRONAUT HIGHHOOL AT MIMS FL	Floridan															365							2
BR1595	SEMINOLE RANCH	Surficial															12							
BR1744	SEMINOLE RANCH NR MIMS FL	Intermediate															12							
BR1746	805051003 27S35E31 331 (Brevard Landfill site)	Floridan																		2				
BR1748	Ransom Road Replacement at NASA	Floridan															365		1	2				
BR1835	Parrish Park-Scottsmoor	Floridan															12		4	2				
BR1842	DUDA RANCH L-2 (81204700	Floridan																		2				
BR1844	192-SJR DEER PARK SE - UNIT 13	Floridan																		2				
C-0001	USGS C-30	Floridan																		2				
C-0009	MELROSE (SRWMD)	Floridan																		2				
C-0010	USGS C-29	Floridan																		2				
C-0018	ST MARYS-KRAFT #2	Floridan															12			2				
C-0031	LAKE GENEVA	Floridan													12					2				
C-0038	C-18 MUIR Well nr Doctors Lake	Floridan																		2				
C-0059	JOHN HUNTLEY WELL	Floridan																		2				
C-0094	USGS Test Well Nr Orange Park	Floridan															12		1	2				
C-0116	BROOKLYN LAKE	Intermediate															12							
C-0120	BROOKLYN LAKE	Floridan													12		365		365	1	2			
C-0123	SUNGARDEN TOWER	Floridan								12		1			12		12		1	2				
C-0124	SUNGARDEN TOWER 150ft	Intermediate								12					12		12							
C-0125	SUNGARDEN TOWER	Surficial								12					12		12							
C-0126	PENNEY FARMS TOWER	Surficial								365					365		365							
C-0127	PENNEY FARMS TOWER	Intermediate								365					365		365							
C-0128	PENNEY FARMS TOWER	Floridan								365		1			365		365		1	2				
C-0373	CITY OF GREEN COVE SPRINGS	Floridan																		1				
C-0434	SUNGARDEN TOWER 128ft	Intermediate								12					12		12							
C-0435	YELLOW WATER CK NR MIDDLEBURG FL	Intermediate								12					12		12							
C-0436	LAKE GENEVA #1	Floridan													365		365							
C-0437	LAKE GENEVA #2	Intermediate													365		365							
C-0438	LAKE GENEVA #3	Surficial													365		365							
C-0442	CHESTER MOODY	Floridan															365							
C-0443	CHESTER MOODY	Intermediate															365							
C-0444	CHESTER MOODY	Surficial															365							
C-0452	BROOKLYN LAKE RPL	Surficial								12					12		12							
C-0453	GOLD HEAD #1	Floridan													365		365		1	2				
C-0454	GOLD HEAD #2	Intermediate													365		365							
C-0455	GOLD HEAD #3	Surficial													365		365							
C-0457	MCCRae FIRE STATION	Floridan													12		12							
C-0458	MCCRae FIRE STATION	Intermediate													12		12							
C-0459	MCCRae FIRE STATION 8-13 ft	Surficial													12		12							
C-0563	YELLOW WATER CK NR MIDDLEBURG FL	Surficial													12		12							
C-0576	aquifer 60-75 Ft BLS	Intermediate													365		365							
C-0577	aquifer 15-30 Ft BLS	Surficial													365		365							
C-0578	Floridan 1085 - 1177 Ft BLS	Lower Floridan													365		2		365					
C-0579	aquifer 320-656 Ft BLS	Floridan													365		2		365					
C-0583	YELLOW WATER CK NR MIDDLEBURG FL	Floridan													12		1		12					
C-1009	Camp Blanding at SR21 & CR 315 - 15-20 Ft	Surficial													12		12							
C-1010	Camp Blanding at SR21 & CR 315 - 140-150 Ft	Intermediate													12		12							
C-1011	Camp Blanding at SR21 & CR 315 - 290-340 Ft	Floridan													12		12			4				
C-1012	Camp Blanding at SR16 55-65 ft	Surficial													12		12							
C-1013	Camp Blanding at SR16 130-145 ft	Intermediate													12		4		12					
C-1014	Camp Blanding at SR16 210-430 ft	Floridan													12		4		12					
C-1015	Camp Blanding Northern Perimeter - 25-30 Ft	Surficial													12		12							
C-1016	Camp Blanding Northern Perimeter - 64-74 Ft	Intermediate													12		4		12					
C-1017	Camp Blanding Northern Perimeter - 500-550 Ft	Floridan													12		4		12					
C-1020	Camp Blanding at SR21 & CR 315 - 55-65 Ft	Intermediate													12		4		12					
C-1026	Clarks Creek Near Lens 330-380 Ft	Floridan													12		4		12					
C-1030	Bayard Point Wildlife MA nr Green Cove Springs	Surficial															4		12					
C-1031	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1032	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1033	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1034	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1035	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1036	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1037	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1038	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1039	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1040	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1042	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1043	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1044	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1045	Bayard Point Wildlife MA nr Green Cove Springs	Surficial																						
C-1056	BLS	Floridan															12		4		2			
C-1060	Lake Ashbury 29-39 ft	Surficial															12		4					

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C-1063	Lake Asbury Observation Well	Floridan															12		4	2				
CO0005	DAVID WOOD - SRWMD C-3	Floridan																		2				
D-0009	FT. CAROLINE (GS# DS-522)	Surficial													365		365							
D-0010	FT CAROLINE (GS# DS-523)	Intermediate													365		365							
D-0048	USGS 3450 SUNNY	Floridan																		2				
D-0085	OIL TEST Well (USGS source)	Floridan																		2				
D-0160	CITY OF NEPTUNE BEACH C	Floridan													12		12			2				
D-0164	RIBAULT CLUB AT FT. GEOR	Floridan																		2				
D-0221	Rolling Hills 517-996 Ft	Floridan																		4				
D-0254	J-0321 SEABOARD RAILROAD	Floridan																		12				
D-0259	Beach Haven 365-845 Ft; Logged 8/26/02 TDL 845 Ft	Floridan																		12				
D-0326	USGS Pot Map well owner unknown	Floridan																		4				
D-0348	J-0413 MONTICELLO DRUG	Floridan																		2				
D-0401	Duval County USGS Pot Map well owner unknown	Floridan																		2				
D-0424	FT. CAROLINE NATIONAL P	Floridan																		12				
D-0545	SOUTHSIDE FIRETOWER (GS# DS-520)	Surficial																		365				
D-0546	SOUTHSIDE FIRETOWER (GS# DS-521)	Intermediate																		365				
D-0547	SOUTHSIDE FIRETOWER (GS# D-3824)	Floridan																		365				
D-0667	Panama Park	Floridan																		12				
D-0673	Tisonia Tower 450-875 ft	Floridan																		365				
D-1021	POWEL AT BAYARD	Floridan																		12				
D-1154	Tisonia Tower 80-100 ft	Intermediate																		12				
D-1156	Tisonia Tower 240-280 ft	Intermediate																		12				
D-1157	Tisonia Tower 40-60 ft	Surficial																		12				
D-1292	Indian Trails No. 1	Floridan																		12				
D-1301	Mandarin Terrace 500-780 Ft	Floridan																		4				
D-1307	Camden Rd 535-978 ft	Floridan																		4				
D-1309	Old Kings Rd. 510-620 Ft	Floridan																		12				
D-1312	GREENLAND PINES ELEMENTARY NR FRUIT COVE FL	Surficial																		12				
D-1313	GREENLAND PINES ELEMENTARY NR FRUIT COVE FL	Floridan																		12				
D-1342	TOWN OF BALDWIN	Floridan																		2				
D-1344	Dewey Park NAS JAX Fernindina PZ well	Lower Floridan																		365				
D-1393	Dewey Park NAS JAX Intermediate	Intermediate																		4				
D-1394	Dewey Park NAS JAX Upper Floridan	Floridan																		365				
D-1405	Dewey Park NAS JAX Surficial DSMW-38	Surficial																		365				
D-1406	Dewey Park NAS JAX Surficial SSMW-35	Surficial																		365				
D-1411	Julington Creek SF 24-34 Ft	Surficial																		365				
D-2386	SJRWMD HANNA PARK TEST	Lower Floridan																		12				
D-2847	GOLF COURSE well. USGS thinks Floridan	Floridan																		12				
D-3060	Arlington East STP USGS/SJRWMD	Lower Floridan																		12				
D-4610	Reconstruction of D-0291	Lower Floridan																		2				
F-0087	USGS FLAGLER TRIB 14	Floridan																		12				
F-0158	ITT PALM COAST 284R	Floridan																		12				
F-0164	LEVITT DEVELOPMENT	Intermediate																		365				
F-0165	ITT-LW-20	Floridan																		365				
F-0174	Flagler Beach State Park (IM)	Intermediate																		1				
F-0176	BULOW RUINS UFA	Floridan																		12				
F-0177	BULOW RUINS SF	Surficial																		365				
F-0191	WASHINGTON OAKS STATE P	Surficial																		1				
F-0200	WASHINGTON OAKS STATE P	Floridan																		365				
F-0206	CONTAINER CORPORATION CO	Floridan																		1				
F-0225	LENSSEN AT BEVERLY BEACH FL	Floridan																		1				
F-0240	CODY'S CORNER	Floridan																		2				
F-0251	RELAY TOWER - DEEP	Floridan																		365				
F-0252	RELAY TOWER - SH	Surficial																		12				
F-0286	Ormond Beach Flagler 2 nr Ormond Beach	Floridan																		12				
F-0293	DINNER ISLAND	Intermediate																		12				
F-0294	DINNER ISLAND	Floridan																		12				
F-0295	DINNER ISLAND	Surficial																		2				
F-0351	WESTSIDE BAPTIST NR BIMINI FL	Intermediate																		12				
F-0352	WESTSIDE BAPTIST NR BIMINI FL	Surficial																		365				
F-0353	WESTSIDE BAPTIST NR BIMINI FL	Floridan																		1				
IR0040	IRC	Floridan																		365				
IR0114	CITY OF VERO BEACH	Surficial																		1				
IR0189	Rollins Ranch near Yeshaw Junction	Floridan																		365				
IR0312	Oslo Observation Well	Floridan																		12				
IR0365	NR YEEHAW OFF SR60	Floridan																		365				
IR0366	TH Mace Ranch nr Palm Bay	Floridan																		2				
IR0379	POOLE	Floridan																		2				
IR0383	JACK BERRY GROVES	Floridan																		2				
IR0900	CORRIGAN RANCH NR WABASSO FL	Surficial																		12				
IR0902	SJWCD NR SOUTH VERO BEACH FL	Surficial																		365				
IR0921	MORRISON NR FELLSMERE FARMS	Floridan																		12				
IR0944	BLUE CYPRESS NR FELLSMERE CITY FL	Surficial																		2				
IR0946	CORRIGAN RANCH NR WABASSO FL	Intermediate																		12				

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L-0815	Seminole SF 62-72	Intermediate		365																				
L-0816	Seminole State Forest - Brantly Branch Road - 120-220 Ft	Floridan			4											365		365		2				
L-0817	Seminole State Forest - 920-1030 Ft	Lower Floridan			4											365								
L-0829	Lake Dorr T 1 nr Umatilla	Surficial																						
L-0830	Lake Dorr T 1 nr Umatilla	Surficial																						
L-0831	Lake Dorr T 1 nr Umatilla	Surficial																						
L-0832	Lake Dorr T 1 nr Umatilla	Surficial																						
L-0833	Lake Dorr T 2 nr Umatilla	Surficial																						
L-0834	Lake Dorr T 2 nr Umatilla	Surficial																						
L-0835	Lake Dorr T 2 nr Umatilla	Surficial																						
L-0836	Lake Dorr T 2 nr Umatilla	Surficial																						
L-0837	Lake Dorr T 3 nr Umatilla	Surficial																						
L-0838	Lake Dorr T 3 nr Umatilla	Surficial																						
L-0839	Lake Dorr T 3 nr Umatilla	Surficial																						
L-0840	Lake Dorr T 3 nr Umatilla	Surficial																						
L-0841	Boyscout Camp at Lake Norris	Surficial																						
L-0842	Boyscout Camp at Lake Norris	Surficial																						
L-0843	Boyscout Camp at Lake Norris	Surficial																						
L-0844	Boyscout Camp at Lake Norris	Surficial																						
L-0845	Boyscout Camp at Lake Norris	Surficial																						
L-0846	Boyscout Camp at Lake Norris	Surficial																						
L-0847	Boyscout Camp at Lake Norris	Surficial																						
L-0848	SW Shore on Lake Norris	Surficial																						
L-0849	SW Shore on Lake Norris	Surficial																						
L-0850	SW Shore on Lake Norris	Surficial																						
L-0851	SW Shore on Lake Norris	Surficial																						
L-0852	SW Shore on Lake Norris	Surficial																						
L-0853	SW Shore on Lake Norris	Surficial																						
L-0854	SW Shore on Lake Norris	Surficial																						
L-0855	SW Shore on Lake Norris	Surficial																						
L-0856	SW Shore on Lake Norris	Surficial																						
L-0857	SW Shore on Lake Norris	Surficial																						
L-0858	SW Shore on Lake Norris	Surficial																						
LE0001	Bullock-Huber well nr Williston	Floridan								12														
M-0013	MOSS BLUFF	Floridan		12						12		1					12		1		2			
M-0021	SALT RUN	Floridan								12		2					12		2		2			
M-0024	CE84 HIGHWAY 316	Floridan								12		1					12		1		2			
M-0025	CE54 GORES LANDING	Floridan								365							365				2			
M-0026	CE47 NR SILVER SPRINGS	Floridan															365		1		2			
M-0031	CE36 AT PEDRO	Floridan															12		1		2			
M-0036	CE55 SR314	Floridan																	1					
M-0037	CE39 SR464	Floridan																	1					
M-0038	CE79 SR35	Floridan															12				2			
M-0039	CE45 NE 35ST	Floridan											12											
M-0040	CE80 SR40 90R	Floridan											12											
M-0041	CE33 SR475B	Floridan																						
M-0044	REDWATER LAKE	Floridan								12		1					12		1		2			
M-0045	REDWATER LAKE	Surficial								12							12							
M-0049	SR19 & 40	Floridan								12		1							1					
M-0052	FT MCCOY 160ft	Floridan								365		1					365		1		2			
M-0059	ROMP 120	Floridan																						
M-0061	NAVY LOOKOUT TOWER	Floridan																						
M-0062	KOA AT LAKE NICTOON	Floridan																						
M-0063	SPARR REPLACEMENT	Floridan															12		1		2			
M-0112	Central Lookout Firetower 3" UFA SR40 E of Lynne	Floridan																						
M-0239	NE 10TH ST DEEP	Floridan																		1				
M-0306	Lake Eaton Rec Site 4" UFA OcalaNF pitcher pump	Floridan																						
M-0321	CE31 GOLDEN FLAKE PLANT	Floridan															12				2			
M-0322	Ocala Public Supply	Floridan																		1				
M-0360	USGS Obs well CE-23 Nr Dunnellon	Floridan																						
M-0367	HUFF NR MCINTOSH	Floridan								12							12				2			
M-0375	SUNNY HILL FARMS	Floridan																		1				
M-0411	FSR 595 AND 579 NR SILVER SPRINGS SHORES FL	Surficial		365																				
M-0412	BOMBING RANGE NR ASTOR FL	Surficial			365																			
M-0413	Forest Service Rd 90 west of SR 19	Floridan			365																			
M-0414	Forest Service Rds 31 & 97	Floridan			365																			
M-0419	SHERIFFS OFFICE AT OCALA FL	Floridan Unconfined																						
M-0440	Samples from 0 to 143 Ft BLS are from a test hole 10 ft	Surficial								365							12		1		2			
M-0441	G&M CATTLE RANCH NR ORANGE SPRINGS FL	Floridan								365		1					365		1		2			
M-0443	CITRA RANCH NR CITRA FL	Floridan								12		1					12		1		2			
M-0445	TIGER DEN REPLACEMENT NR OCKLAWAHA FL	Floridan		365	1																			
M-0463	Fl McCoy Elementary 130-180 Ft	Floridan								12		4					12			4	2			
M-0465	Belleview Elementary 64-115 Ft	Floridan															12			4	2			
M-0467	Lake Weir Middle school 58-118 Ft	Floridan															365			4	2			
M-0471	manhole	Floridan								12		4					12			4	2			

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OR0563	83111802 22S30E34 ENGLEWOOD SUBDIVISION WELL	Floridan																		2				
OR0613	Cocoa S Lower Floridan	Lower Floridan		365													365							
OR0614	COCOA SITE S 1250ft	Lower Floridan		365																				
OR0615	COCOA SITE S 1050ft	Floridan		365																				
OR0617	LONGBRANCH	Floridan		12	2												12							
OR0618	LONGBRANCH 1280ft	Lower Floridan		12	2												12							
OR0648	LONGBRANCH AT BITHLO FL	Surficial		12													12							
OR0649	LONGBRANCH AT BITHLO FL	Surficial		12													12							
OR0650	ROCK SPRINGS NR APOPKA FL	Surficial		365																				
OR0651	ROCK SPRINGS NR APOPKA FL	Intermediate		365																				
OR0652	ROCK SPRINGS 506FT AT ROCK SPRINGS SP	Floridan		365															2					
OR0661	CRATE MILL NR APOPKA FL	Surficial															12							
OR0662	ROCK SPRINGS 180FT AT ROCK SPRINGS SP	Floridan		365															2					
OR0664	ALAFAYA TRAIL WTP NR UNION PARK	Surficial		365													365							
OR0665	ALAFAYA TRAIL WTP NR UNION PARK	Surficial		365													365							
OR0668	ALAFAYA TRAIL WTP NR UNION PARK	Lower Floridan		365	2		365										365							
OR0669	COCOA WELL FIELD SITE 13T	Floridan		365	4															2				
OR0673	COCOA WELL FIELD SITE 13T	Floridan		365	4																			
OR0675	COCOA WELL FIELD SITE 13T	Floridan		365	4																			
OR0676	ALAFAYA TRAIL WTP NR UNION PARK	Lower Floridan		365	2		365										365							
OR0678	ALAFAYA TRAIL WTP NR UNION PARK	Floridan		365	2		365										365			2				
OR0740	Cocoa A	Floridan															12			2				
OR0794	Plymouth Tower Deep 1050-1407 Ft	Lower Floridan															12		4					
OR0796	Apopka Crate Mill near East 9th St And South Park Ave.	Floridan															12			2				
OS0001	USGS OB NR LAKE JOEL	Floridan																		2				
OS0004	BULL CREEK WMA	Floridan															12			2				
OS0022	BULL CREEK APT TP	Floridan		365																				
OS0023	BULL CREEK APT TM1	Floridan		365																				
OS0024	BULL CREEK APT S2	Surficial		365																				
OS0025	BULL CREEK APT TM2	Lower Floridan			2												365							
OS0027	BULL CREEK APT D1	Floridan			2																			
OS0028	BULL CREEK APT D2	Floridan			2																			
OS0031	BULL CREEK APT SJ61	Floridan			2																			
OS0033	816051 25S34E36 DSR38 USGS thinks Floridan	Floridan																					2	
OS0038	OSF-42	Floridan																					2	
OS0047	TH-10 WILLIAMS RD	Floridan																					2	
OS0050	USGS OS-254 MERCANTILE LANE W	Floridan																					2	
OS0051	TH-3 LAKE POINSETT SW	Floridan																					2	
OS0052	TH-9 NOVA RD 532 WEST	Floridan																					2	
OS0069	TH-6 Deer Park nr June Park	Floridan								12							12						2	
OS0082	OSF-53 S-61 WELL NR ALCO	Floridan																					2	
OS0171	USGS OS171 DESERET AT SR	Surficial		12							12													
OS0179	USGS US 192 AT DEER PARK	Surficial		365							365													
OS0227	ADAMS RANCH	Surficial		365																				
OS0228	CAMBELL RANCH NR KENANSVILLE FL	Surficial		12							12						12							
OS0229	ADAMS RANCH	Intermediate		365																				
OS0230	ADAMS RANCH	Floridan		365																				
OS0231	CAMPBELL RANCH	Floridan								12		2					12		2	2				
OS0232	CAMPBELL RANCH NR KENANSVILLE FL	Intermediate								12							12							
OS0238	TH-4 Deer Park nr St Cloud	Floridan								12							12							
OSF-4	JOE OVERTREET WELL	Floridan																					2	
P-0001	SWAN LAKE DRAINAGE	Floridan													365					1				
P-0123	DHO	Floridan															365			1			2	
P-0143	NILES ROAD	Intermediate					365								365									
P-0146	SILVER POND	Intermediate					365								365									
P-0148	DHO SH	Surficial															365							
P-0172	ORANGE MILL	Floridan																						
P-0246	THUNDERBIRD AIRPORT NR LAKE COMO FL	Floridan						12							365		365			2		2		
P-0270	FRUITLAND HANDYWAY	Floridan																					1	2
P-0306	CR 315	Floridan								12		1					12			2		1	2	
P-0408	FRUITLAND	Floridan					365								365								1	
P-0409	FRUITLAND	Surficial					365								365								1	
P-0410	JUMPING GULLY RD	Floridan																					1	
P-0418	RAVINE STATE GARDENS	Floridan																					2	
P-0427	NR FRONTIER	Floridan																					1	
P-0450	ROAD 77-B	Floridan								12		1					12			1		2		
P-0464	COWPEN LAKE DRAINAGE	Floridan													12	2							2	
P-0469	PARADISE LAKES EAST	Floridan																					1	
P-0472	Johnson Field	Floridan								12		1					12			1		2		
P-0473	JOHNSON FIELD	Surficial								12							12						1	
P-0474	San Mateo Tower - Deep	Floridan																					2	2
P-0475	SAN MATEO TOWER - SH	Surficial													12		12			2		2		
P-0493	TRISAIL ROAD	Floridan																					2	
P-0495	CLIFTON ROAD	Floridan																					1	
P-0510	HOLLISTER WORK CENTER C	Floridan													12		12			1		2		

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P-0511	HOLLISTER WORK CENTER U	Surficial													12		12							
P-0696	SILVER POND	Floridan					365								365									
P-0705	NILES ROAD	Floridan					365								365									
P-0724	SILVER POND	Surficial					365								365									
P-0734	MIDDLE ROAD - SH	Surficial															365							
P-0735	MIDDLE ROAD L-CF	Floridan															365						2	
P-0736	MIDDLE ROAD U-CF	Floridan															365			2			2	
P-0737	MIDDLE ROAD - DEEP	Surficial															365							
P-0738	ROAD 77-B	Surficial								12							12							
P-0742	NILES ROAD	Surficial					365								365									
P-0772	LAKE GRANDIN	Floridan													12				1					
P-0773	LAKE GRANDIN	Intermediate													12									
P-0774	LAKE GRANDIN	Surficial													12									
P-0776	MARVIN JONES ROAD	Floridan													365									
P-0777	MARVIN JONES ROAD	Intermediate													365									
P-0778	MARVIN JONES ROAD	Surficial													365									
P-0817	Nr Lk Broward Floridan (P-0413 Replace)	Floridan				12	12												1	2				
P-0818	Nr Lake Broward Surficial	Surficial				12	12																	
P-0819	CARAVELLE RANCH	Surficial																						
P-0820	FRONTIER DANCE HALL	Surficial								365							365							
P-0821	FOREST ROAD 77	Surficial																						
P-0822	FLORIDA ROCK MW-1	Floridan															12			2				
P-0830	BARGE PORT	Floridan													12									
P-0831	WELAKA STATE FOREST 158	Surficial																						
P-0832	WELAKA STATE FOREST 368	Surficial																						
P-0833	WELAKA STATE FOREST 158	Surficial																						
P-0879	E H MILLERHOOL	Surficial													12		12							
P-0883	E H MILLERHOOL	Intermediate													12		12							
P-0891	E.H. Miller School	Floridan													12	2	12			2				
P-2035	LAKE STELLA NR CRESCENT CITY FL	Surficial															365							
P-2036	LAKE STELLA NR CRESCENT CITY FL	Intermediate															365							
P-2037	LAKE STELLA NR CRESCENT CITY FL	Floridan															365							
P-4043	Murphy Island WTP	Floridan																	1	2				4
P-4044	Welaka State Forest nr Welaka	Surficial																						
P-4045	Welaka State Forest nr Welaka	Surficial																						
P-4046	Welaka State Forest nr Welaka	Surficial																						
P-4047	Welaka State Forest nr Welaka	Surficial																						
P-4048	Welaka State Forest nr Welaka	Surficial																						
P-4049	Welaka State Forest nr Welaka	Surficial																						
P-4050	SJRWMH HQ Trail nr Palatka UC	Surficial																						
P-4051	SJRWMH HQ Trail nr Palatka UC	Surficial																						
P-4052	Caravelle Wildlife MA nr Welaka	Surficial																						
P-4053	Caravelle Wildlife MA nr Welaka	Surficial																						
P-4054	Ocala NF Road 77 East nr Welaka	Surficial																						
P-4055	Caravelle Wildlife MA nr Welaka	Surficial																						
P-4056	Caravelle Wildlife MA nr Welaka	Surficial																						
P-4057	Caravelle Wildlife MA nr Welaka	Surficial																						
P-4058	Caravelle Wildlife MA nr Welaka	Surficial																						
P-4059	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4060	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4061	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4062	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4063	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4064	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4065	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4066	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4067	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4068	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4069	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4070	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4071	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4072	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4073	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4074	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4075	Lake George Wildlife MA nr Crescent City	Surficial																						
P-4076	Welaka State Forest nr Welaka	Surficial																						
P-4077	Welaka State Forest nr Welaka	Surficial																						
P-4078	Welaka State Forest nr Welaka	Surficial																						
P-4079	Ocala NF Road 77 East nr Welaka	Surficial																						
P-4081	Buck Springs Road - 15-20 Ft BLS Unconfined aquifer	Surficial														4								
P-4083		Floridan													365	4	365			2				
P-4084	Etoniah East V Rd nr Baywood (SF)	Surficial													365	4	365							
P-4085	Etoniah East V Rd nr Baywood (IM)	Intermediate													365		365							
P-4086	Etoniah East V Rd nr Baywood (FL)	Floridan													365	4	365			2				
PO0001	Thornhill Ranch Deep (Floridan aquifer) Nr Davenport FL	Floridan								12							12			2				

SN	Site Name	Aquifer	Central Florida Discharge	Central Florida Level	Central Florida Quality	Consent Agreement Lvl	CUP Level	Legislative Mandate Lvl	Legislative Mandate Quality	Natural Baseline Level	Natural Baseline Quality	Natural Baseline Quality	NC Florida Level	NE Florida Discharge	NE Florida Level	NE Florida Quality	Regional Level	Regional Quality	Regional Quality	Regional Semiannual Level	Volusia Discharge	Volusia Level	Volusia Quality	WSM - Toth - Quality
PO0002	Davenport FL	Surficial								12							12							
PO0006	LAKE ALFRED DEEP NR LAKE ALFRED	Floridan															12			2				
PO0014	LAKE ALFRED DEEP AT LAKE ALFRED	Floridan																		2				
S-0001	with Snow Hill Rd	Floridan						365	2										2					
S-0025	Kilbee Ranch #3 154FT	Floridan			2					12		2					12			2				
S-0028	COCHRAN FOREST EAST	Floridan							2										2					
S-0034	WINONA DRIVE	Floridan							2										2					
S-0038	COCHRAN FOREST WEST	Floridan							1										1					
S-0086	OSCEOLA LANDFILL 225	Floridan						365	2	365		2							2					
S-0097	WEKIVA RIVER HAVEN	Floridan																	2					
S-0125	USGS OB SEM 125 (HENNES)	Floridan															365							
S-0200	OSCEOLA LANDFILL 550	Floridan						365	2	365		2							2					
S-0202	OSCEOLA LANDFILL 60R	Intermediate						365		365														
S-0266	OSCEOLA LANDFILL 14ft	Surficial								365									365					
S-0829	Spring Hammock-deep	Floridan																	12		1		2	
S-0972	LAKE MARY PS WELL #2, RINEHART RD	Floridan																	1					
S-1014	CHARLOTTE STREET 300	Floridan																	365		2		2	
S-1015	CHARLOTTE STREET	Surficial																	365					
S-1016	CHARLOTTE STREET 700	Floridan			2														365					
S-1017	CHARLOTTE STREET 480	Floridan																	365					
S-1023	GENEVA REPLACEMENT	Surficial						365											365					
S-1024	CHARLOTTE STREET 150	Lower Floridan			2														365					
S-1056	CITRUS ROAD WELL NR CASSELBERRY	Floridan		12																2				
S-1078	OVIEDO WTP	Lower Floridan			2														12					
S-1189	OVIEDO WTP AT OVIEDO	Floridan			2														12					
S-1193	OVIEDO WTP AT OVIEDO	Floridan			2														12					
S-1200	CHULUOTA CDP FL	Floridan		12	2																		2	
S-1201	CHULUOTA CDP FL	Floridan		12	2																			
S-1211	OVIEDO WTP	Surficial																	12					
S-1224	GENEVA FS 540FT NR GENEVA	Floridan			2			365	2										12					
S-1225	YANKEE LAKE STP NR SANFORD	Lower Floridan			2														12					
S-1230	YANKEE LAKE STP NR SANF	Floridan			2														12					
S-1244	Florida Ave Well Nr Oviedo-290 Ft	Floridan																					2	
S-1253	GENEVA FS 280FT NR GENEVA	Floridan			2			365	2														2	
S-1257	CITRUS ROAD WELL NR CASSELBERRY	Floridan		12	2																			
S-1275	Wekiva Springs Elementary	Surficial			365																			
S-1276	Bear Lake Elementary	Surficial			365																			
S-1277	Lake Orienta Elementary	Surficial			365																			
S-1278	English Estates Elementary	Surficial			365																			
S-1279	Eastbrook elementary	Surficial			365																			
S-1280	Red Bug Lake Elementary	Surficial			365																			
S-1281	Longwood Elementary	Surficial			365																			
S-1283	Greenwood Middlehool	Surficial			365																			
S-1284	Wilson Elementary	Surficial			365																			
S-1286	Jackson Heights Elementary	Surficial			365																			
S-1287	Partin elementary	Surficial			365																			
S-1288	GENEVA FIRE STATION WELL NR GENEVA FL	Surficial						365																
S-1291	Casselberry elementary	Surficial			365																			
S-1292	Keeth Elementary	Surficial			365																			
S-1294	Sabal Point Elementary	Surficial			365																			
S-1296	Seminole County Transportation Services	Surficial			365																			
S-1297	Rock Lake Middlehool	Surficial			365																			
S-1300	CHULUOTA CDP FL	Surficial			12																			
S-1301	CHULUOTA CDP FL	Surficial			12																			
S-1310	YANKEE LAKE STP NR LAKE MARY FL	Surficial			12																			
S-1310	YANKEE LAKE STP NR LAKE MARY FL	Surficial			12														12					
S-1328	OLD GENEVA FIRE STATION AT GENEVA	Floridan			2			365	2															
S-1329	CITRUS ROAD WELL NR CASSELBERRY	Lower Floridan		12	2																			
S-1337	CITRUS ROAD WELL NR CASSELBERRY	Surficial			12																			
S-1351	LAKE MARY DISPOSAL	Lower Floridan			12	2																		
S-1385	SANFORD ZOO NR SANFORD FL	Intermediate			365																			
S-1386	SANFORD ZOO NR SANFORD FL	Surficial			365																			
S-1397	Sanford Zoo Nr Sanford - FL - 120-180 Ft	Floridan			365	4																		
S-1398	Sanford Zoo Nr Sanford - FL - 330-370 Ft	Floridan			365	4																		
S-1406	LAKE MARY DISPOSAL	Floridan			12	1																		
S-1407	LAKE MARY DISPOSAL	Floridan			12																			
S-1408	LAKE MARY DISPOSAL	Floridan			12																			
S-1477	Seminole Env Ctr	Surficial			12															1				
S-1511	1289 which was abandoned	Surficial			365																			
SJ0005	SJ-S PALM VALLEY AT PALM	Floridan																						
SJ0025	USGS SJ-150 PONTE VEDRA TEST	Lower Floridan													12				12					
SJ0027	BAKERSVILLE TOWER	Floridan													365				365		2		2	
SJ0028	BAKERSVILLE TOWER	Surficial													12				12					
SJ0029	DURBIN FIRE TOWER	Floridan													365				365		1		2	
SJ0030	DURBIN FIRE TOWER	Intermediate													365				365					
SJ0032	DURBIN FIRE TOWER	Surficial													365				365					

