

DIRECT TESTIMONY
OF
CHARLES W. DRAKE, P.G.

TO
THE STATE OF FLORIDA
PUBLIC SERVICE COMMISSION

RE: APPLICATION OF FARMTON WATER RESOURCES, LLC
FOR ORIGINAL WATER CERTIFICATE
IN VOLUSIA AND BREVARD COUNTIES, FLORIDA

DOCKET NUMBER 021256-WU

JULY 2003

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1 Q. State your name and address.

2 A. Charles W. Drake, P.G., Hartman & Associates, Inc., 201 E.
3 Pine Street, Orlando, Florida 32801.

4 Q. Mr. Drake, are you a registered professional geologist in
5 the State of Florida?

6 A. Yes. My registration number is 00037.

7 Q. Mr. Drake, what is your area of specialty in your practice?

8 A. I specialize primarily in hydrogeology and related issues
9 that involve water supply.

10 Q. What is hydrogeology?

11 A. It is the science that studies the occurrence and movement
12 of groundwater and aspects of surface water.

13 Q. Have you ever been qualified as an expert witness in water
14 supply and hydrogeological issues?

15 A. Yes, I have on several occasions over the past 18 years.

16 Q. In what areas are you going to provide testimony in this
17 matter?

18 A. In water supply and hydrogeology associated with the
19 application of Farmton Water Resources, LLC, for the Florida
20 Public Service Commission original water certificate.

21 Q. Was the application for certificate and supporting financial
22 engineering and technical information prepared by your firm?

23 A. Yes, our firm prepared the engineering, accounting,
24 hydrogeological and utility management aspects of the
25 application on behalf of our client, Farmton Water

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1 Resources, LLC, which were included in Composite Exhibit
2 "GCH-1".

3 Q. Was the application submitted to the Public Service
4 Commission?

5 A. Yes, this has been presented as Exhibit GCH-1.

6 Q. Are the matters contained in the application and supporting
7 reports true and accurate representations to the Florida
8 Public Service Commission in your opinion?

9 A. Yes, they are.

10 Q. Have you had occasion to review the water use permitting
11 issues in this region?

12 A. Yes. The St. Johns River Water Management District has
13 issued reports on the resources of Volusia and Brevard
14 counties, and there appears to be, in their opinion, a
15 limitation on the available groundwater supplies in this
16 region of existing water utilities.

17 Q. Does Farmton have the technical ability to serve the
18 requested territory?

19 A. Yes, as provided in the application and supporting
20 documents.

21 Q. Does Farmton have, or are they implementing, sufficient
22 water withdrawal capacity to serve the requested territory?

23 A. Yes, based upon our analysis, which is reflected in the
24 application and supporting documents. Farmton has the
25 existing capacity to serve all of the needs for existing

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1 services and they are in the best position to be able to
2 obtain the water needed for the other proposed services.

3 Q. Does Farmton Water Resources, LLC have continued use of the
4 land upon which the utility facilities are or will be
5 located?

6 A. Yes they do, and the Company provided that information to
7 the FPSC as part of the application.

8 Q. Who is providing the financial testimony in this case?

9 A. Ms. Tara L. Hollis, C.P.A.

10 Q. Are you expecting to provide rebuttal testimony?

11 A. To the extent that it is needed, yes.

12 Q. Do you have a resume?

13 A. Yes, that is attached as Exhibit CWD-1.

14 Q. Does this conclude your Direct Testimony?

15 A. Yes.

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EXHIBIT CWD-1

Charles W. Drake, P.G.

RESUMÉ



CHARLES W. DRAKE, P.G.

VICE PRESIDENT

EDUCATION

B.S., Geology, University of Florida, 1982

PROFESSIONAL REGISTRATION

Professional Geologist No. 37, Florida
Professional Geologist No. 440, Alabama
Professional Geologist No. 1618, North Carolina

PROFESSIONAL AFFILIATIONS

Assn of Groundwater Scientists and Engineers
American Water Resources Association

QUALIFICATIONS SUMMARY

Mr. Drake's experience includes the design, permitting and coordination of mechanical integrity tests; design and analysis of aquifer performance tests; groundwater flow and solute transport simulations; the design of wells (open hole and screened) and wellfields; and obtaining

consumptive use permits for public supply wellfields, golf course irrigation and other uses. Using analytical and numerical methods, Mr. Drake has designed effluent disposal ponds, retention ponds and infiltration galleries, and estimated the impact of drainage ditches on groundwater flow, wetlands and water bodies. He instructs a session on Wetlands Hydrology for the Florida Chamber of Commerce and Permitting Summer School.

In addition to his wide range of hydrologic and hydrogeologic experience, Mr. Drake is a qualified expert witness in hydrogeology, well construction, groundwater flow and solute transport modeling, water use permitting, and water resource planning. He is also a "Wells and Wellfield Management" instructor for the Florida Water Pollution Control Operators Association.

EXPERIENCE

Mr. Drake has a wide range of experience related to groundwater resources and hydrogeology and hydrology. His areas of expertise are water use permitting, water well design, permitting, construction, and testing groundwater flow and solute transport modeling, reuse of reclaimed water, wetlands hydrology, and the interaction of groundwater and surface water. A brief summary of representative projects is as follows:

Expert Witness

Mr. Drake has provided expert witness services on projects ranging from wellfields that have impacted wetlands and surface water bodies, to the pumping of water into lakes that has caused significant flooding, to evaluating the rise in surface water bodies due to man-made conditions and natural conditions, to using groundwater flow models to determining whether an area meets the hydrologic wetland criteria. He has evaluated the design and effective capacity of effluent disposal ponds and worked successfully with the FDEP and attorneys to properly rate the pond capacity.

Mr. Drake has testified in civil court and in numerous Department of Administrative Hearings on hydrologic and hydrogeologic issues.

Mr. Drake has provided hydrologic expert witness testimony on several litigation cases:

- Charlotte County vs. CMI and Southwest Florida Water Management District, 1992.

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- Osceola County vs. St. Johns River Water Management District and South Brevard Water Authority, 1991.
- Andrews Land and Timber, 2000
- Deseret Ranches vs. City of Cocoa, 1988
- City of St. Cloud vs. South Florida Water Management District, 1987.
- C.V. Reit vs. Deltona Utilities.
- C-Red vs. St. Johns River Water Management District
- Rollins vs. St. Johns River Water Management District
- Walton County vs. Northwest Florida Water Management District, WRP, Inc.

Mr. Drake has provided expert witness services in many other cases where testimony was not required. These include:

- Collier Condemnation, 1994.
- Lawson vs. Orlando Expressway Authority, 1994.
- Eberhart, 1994.
- Pillsbury et al. vs. Gate Maritime Petroleum, 1993.
- Uddo vs. Orange County, 1992.
- Bal Bay Realty vs. Orange County, 1988.
- Greco vs. West Coast Regional Water Supply Authority, 1988.
- Charles Knight vs. West Coast Regional Water Supply Authority, 1987.
- Lithia-Pinecrest Property Owners vs. West Coast Regional Water Supply Authority, 1987.
- Chinelli vs. Volusia County and FDOT
- Florida Turnpike Authority vs. Schmidt

Water Use Permitting

1982-1985 Hydrogeologist at St. John's River Water Management District reviewing/evaluating all types of water use permit applications.

From 1985 on Mr. Drake has obtained permits for:

- City of Edgewater (2) 5 MGD
- City of Lakeland (3) 33 MGD
- City of Port St. Lucie (2) 10 MGD
- City of Tampa 88 MGD
- Venice Gardens Utilities 6 MGD
- City of Naples (2) 22 MGD
- Arnold Palmer's Bay Hill Club 0.75 MGD
- City of Plant City 11 MGD

Water Well Design, Permitting, Construction, and Testing associated with the water use permits above, Mr. Drake has completed construction projects for:

- City of Edgewater, 4 wells, 300 feet deep
- City of Lakeland, 5 wells, 800 feet deep
- Palm Bay, 9 wells, 100 feet deep
- UCNSB, 1 well, 900 feet deep
- University of South Florida, 2 wells, 300 feet deep
- City of Lake City, 350 feet deep
- City of Melbourne, 850 feet deep

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Groundwater Flow and Mass Transport Modeling

- City of Lakeland wellfields and groundwater protection
- City of Edgewater wellfields
- Farmton Tree Farm wellfields
- UCNSB wellfields
- Venice Gardens wellfield
- Morris Bridge wellfield
- Lake City wellfield
- City of Naples wellfields
- Palm Coast drainage facilities

Reuse of Reclaimed Water

- Tiger Point Golf Course
- Hidden creek Golf Course
- Alafaya Utilities Rapid Rate
- Deltona Hills Golf Course
- Glen Abbey Golf Course
- Prima Vista Utilities

Golf Course Water Supply Due Diligence/Environmental Site Assessment

- Stonebrook
- Summer Haven
- Bevico
- St. James Place

Prior to his association with HAI, Mr. Drake served as department manager of hydrogeology at Dyer, Riddle, Mills & Precourt Inc. (1985-90). From 1982-85, he was a hydrogeologist in the permitting division of the St. Johns River Water Management District, where he reviewed applications for public supply, irrigation and other types of water use. He also was a hydrogeologist with Universal Engineering in Orlando, where he performed subsurface investigations for the design of effluent disposal ponds.

PUBLICATIONS

"Prevention of Saltwater Intrusion Through Artificial Recharge of Groundwater in East Orange County, Florida," Focus Conference on Southeastern Groundwater Issues, NWWA, 1986.

WORKSHOPS/SEMINARS

- Groundwater Flow Modeling hydrology seminar (course instructor) - Layne-Atlantic Inc., 1994.
- Wells and Wellfield Management (course instructor) - Florida Water Pollution Control Operators Association, 1992-94.
- Water Resources Section - Florida Bar Association, 1991.
- Transport and Fate of Contaminants, NWWA, 1991.
- Design and Analysis of Aquifer Performance Tests, NWWA, 1988.
- Southeast Conference on Groundwater Issues, NWWA, 1986.
- Pesticides in Groundwater, NWWA, 1985.
- Wetlands Hydrology (course instructor) Florida Chamber of Commerce.