

DOCKET NO. 010503-WU

ALOHA UTILITIES, INC.

DIRECT TESTIMONY OF JOHN W. PARKER

MARGARET M. LYTLE, APPEARING ON BEHALF OF

INTERVENOR, SOUTHWEST FLORIDA WATER

MANAGEMENT DISTRICT

DATE FILED: NOVEMBER 5, 2001

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FPSC-COMMISSION CLERK

1 DIRECT TESTIMONY OF JOHN W. PARKER

2 Q. Please state your name and professional address.

3 A. John W. Parker, 2379 Broad Street, Brooksville, Florida, 34604-6899.

4 Q. Where are you employed?

5 A. The Southwest Florida Water Management District (SWFWMD).

6 Q. What is your position with the District?

7 A. Water Use Regulation Manager.

8 Q. Please describe your duties in this position.

9 A. I manage the Water Use Permitting and permit compliance work for the
10 parts of the District located north of the Tampa Bay area, including
11 Pasco, Hernando, Citrus, Sumter, and parts of Lake, Marion and Levy
12 Counties.

13 Q. Please describe your training and experience.

14 A. A copy of my current resume is attached as Exhibit 1.

15 Q. In the course of your duties with SWFWMD, have you become familiar with
16 Aloha Utilities, Inc. (Aloha)?

17 A. Yes. Aloha is a company whose activities fall within the regulatory
18 jurisdiction of SWFWMD. Aloha holds a Water Use Permit (WUP), WUP No.
19 203182.004, from the District authorizing the withdrawal of groundwater
20 for public water supply purposes.

21 Q. How long has Aloha held a WUP from the District?

22 A. Aloha has been permitted to withdraw groundwater to supply the customers

1 of their service area since 1979.

2 Q. Please describe Aloha's current WUP.

3 A. WUP No. 203182.004 was issued on April 27, 1999, authorizing the
4 withdrawal of 2,040,000 gallons per day (gpd) on an annual average day
5 and a peak month day withdrawal quantity of 2,470,000 gpd. Aloha
6 currently maintains a service area of about 7,173 acres with a
7 population of about 25,000 persons. Aloha pumps groundwater from the
8 Floridan aquifer, using eight production wells separately distributed
9 throughout the service area.

10 Q. How is compliance with the quantity limitations of a WUP determined?

11 A. A 12-month running average is used to determine compliance with the
12 average annual day quantity, in accordance with the provisions of the
13 Water Use Permit Information Manual, Part B, Basis of Review, Section
14 6.2, which is incorporated by reference in Rule 40D-2.091, Florida
15 Administrative Code (F.A.C.).

16 Q. Is Aloha currently in compliance with its WUP?

17 A. No. Aloha exceeded the permitted annual average day withdrawal by up to
18 about five percent or less for a series of months in 1994, but brought
19 the withdrawal back within the permit limits by the end of the 1994
20 calendar year. Aloha began consistently exceeding the permitted annual
21 average day withdrawal in November 1995, and the percentage of
22 exceedance increased each year from 1996 to 2000. During the past

1 twelve months, from October 2000 through September 2001, the Aloha's
2 average day withdrawal rate has been 2,788,770 gpd, or approximately
3 36.7 percent over the permitted rate. The peak month withdrawal rate
4 was 2,893,622 gpd, or about 17 percent over the permitted rate.

5 Q. What measures has SWFWMD taken to address this noncompliance?

6 A. In May 1997, District staff met with the Aloha's representatives to
7 discuss measures to address the noncompliance. A point of major concern
8 to SWFWMD was that Aloha's service area and groundwater withdrawal
9 points (wells) are located within the Northern Tampa Bay Water Use
10 Caution Area (NTB-WUCA) and the Northern Tampa Bay-Wellfield Impact Area
11 (NTB-WIA).

12 Q. Why was this a reason for concern?

13 A. The District declared portions of Hillsborough, Pasco, and Pinellas
14 Counties a Water Use Caution Area (WUCA) on June 28, 1989. The area
15 designated is provided in Rule 40D-2.801(3)(c), F.A.C. The NTB-WUCA was
16 established to address groundwater withdrawals that have resulted in
17 lowering of lake levels, destruction or deterioration of wetlands,
18 reduction in streamflow, and salt water intrusion. Aloha's withdrawals
19 also take place within the area known informally as the NTB-WIA, where
20 the cumulative groundwater withdrawal impacts from existing sources
21 already exceed the performance standards identified in the Water Use
22 Permit Information Manual, Part B, Basis of Review. The adverse impacts

1 to this area have been well researched and documented. New groundwater
2 withdrawals would have the potential to exacerbate the existing adverse
3 cumulative impacts, and are generally not approved. Therefore, Aloha
4 cannot resolve its noncompliance with its WUP by modifying the WUP to
5 increase the authorized withdrawal quantities.

6 Q. Were other measures to achieve compliance with the WUP discussed?

7 A. Yes. Several options were explored, including the possibility of Aloha
8 acquiring other WUPs and modifying and changing those permitted existing
9 uses to public supply, and additional effluent/reuse projects.

10 Q. What steps did Aloha take to address the noncompliance?

11 A. On October 21, 1998, Aloha submitted a permit application to renew its
12 WUP. During the renewal process, potential alternative water sources
13 other than new groundwater were discussed, including additional water
14 conservation measures, desalination, aquifer storage and recovery, and
15 interconnection to other water suppliers. At the time, Aloha rejected
16 as infeasible all alternative water source options except additional
17 water conservation measures, reuse supply opportunities, and
18 interconnection to Pasco County's water system. The interconnection to
19 Pasco County was advanced by Aloha as the best short-term solution to
20 resolving the over-pumping situation since Aloha already maintained an
21 existing interconnect with the County. It was SWFWMD's understanding
22 that upon issuance of the renewal permit, Aloha would begin utilizing

1 the interconnect to bring its pumpage into compliance with the permitted
2 withdrawal rates. However, to date Aloha has only used the interconnect
3 to obtain relatively small amounts of water, and has continued to
4 significantly overpump its permitted quantities.

5 Q. What was SWFWMD's response to Aloha's continued noncompliance?

6 A. SWFWMD's concern over Aloha's overpumping reached a critical level
7 during the severe drought experienced in west-central Florida between
8 1999 and 2001. Aloha was sent Compliance Notices on April 2, 1999 and
9 June 6, 2000, advising it that pumpage data indicated it had exceeded
10 the quantity authorized by its WUP, and directing it undertake efforts
11 to bring its withdrawals into compliance, such as utilization of the
12 interconnect with Pasco County, searching for other external sources, or
13 implementing other appropriate water use strategies to reduce
14 withdrawals. When Aloha failed to comply with the Compliance Notices, a
15 Notice of Violation was sent November 21, 2000. The Notice of Violation
16 directed Aloha to bring its water withdrawals into compliance with the
17 Permit within 30 days of the notice. When Aloha failed to comply with
18 the Notice of Violation, a Consent Order was proposed on January 5,
19 2001.

20 Q. What is the status of the proposed Consent Order?

21 A. After several meetings and a formal mediation, the parties have been
22 unable to reach a settlement.

1 Q. Is Aloha required to take measures to conserve water?

2 A. Yes. Section 7.3 of the Water Use Permit Information Manual, Part B,
3 Basis of Review, requires special water conservation measures be taken
4 by all permittees located in the NTB-WUCA. Public supply permittees
5 using annual average day quantities of 100,000 gpd or more, in addition
6 to the standard requirements of a WUP holder, are subject to special
7 requirements such as implementation of a water-conserving rate structure
8 and periodic water audits of the water supply system. Additionally,
9 Standard Condition No. 10 of Aloha's WUP requires Aloha to "... practice
10 water conservation to increase the efficiency of transport, application,
11 and use, as well as to decrease waste ...".

12 Q. Is Aloha currently taking adequate measures to conserve water?

13 A. No. Aloha needs to implement a water conserving rate structure, and
14 water conservation programs to comply with SWFWMD rules and its WUP.
15 Aloha has applied to the Public Service Commission for authorization to
16 implement a conserving rate structure, and for funding for water
17 conservation programs, which application is the subject of the
18 proceeding. However, to date Aloha has not taken adequate measures to
19 conserve water.

20 Q. What kind of water conservation programs could Aloha implement to meet
21 SWFWMD rule and WUP requirements?

22 A. Aloha has provided SWFWMD with a draft Compliance Plan containing

1 proposed water conservation programs. The proposed programs include:
2 customer education measures; periodic water audits of the water
3 distribution system; retrofit kits and rebates for indoor plumbing
4 modifications, including a study of the effectiveness of these devices;
5 developing a Internet website containing water conservation information;
6 hiring additional staff to oversee water conservation programs; and
7 expanding reuse measures. If Aloha implemented these programs, in
8 addition to a water conserving rate structure, it would be in compliance
9 with the rule and permit requirements for water conservation.

10 Implementation of the rule and permit requirements for water
11 conservation would be expected to have the effects of reducing the water
12 demands of existing customers, and slowing the rate of growth of demands
13 caused by new customers. However, conservation measures would be
14 expected to eliminate only a portion of the overpumping, and Aloha would
15 still need to address its failure to comply with the water quantity
16 limitations of its WUP, through additional steps.

17 Q. What additional steps could Aloha take to comply with the water quantity
18 limitations of its WUP?

19 A. Aloha must find a source of water to replace the groundwater quantities
20 it is currently withdrawing in excess of the quantities authorized by
21 the WUP. Aloha may do this by purchasing the excess quantity from Pasco
22 County through the interconnect, or by developing an alternative water

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source such as a reverse osmosis facility or other source of water which is both economically and technically feasible and permittable.

CERTIFICATE OF SERVICE

I certify that a true copy of the foregoing was sent by U.S. Mail to the following persons on this 5 day of November 2001:

Ralph Jaeger, Esquire
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

F. Marshall Deterding, Esquire
Rose, Sundstrom & Bentley, LLP
2548 Blainstone Pines Drive
Tallahassee, FL 32301

Stephen C. Burgess
Deputy Public Counsel
Office of Public Counsel
111 West Main Street, Room 812
Tallahassee, FL 32399-1400

Mr. Edward Wood
1043 Daleside Drive
New Port Richey, Florida 34655-4293


Margaret M. Lytle

JOHN W. PARKER, P.G.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FLORIDA 34604-6899
(352) 796-7211 ext. 4332

EDUCATION

UNIVERSITY OF SOUTH FLORIDA

Master of Science, Geology, 1992

emphasis on hydrogeology

thesis title: "Surficial Aquifer Hydrogeology in a Covered-Karst Terrane"

UNIVERSITY OF ARKANSAS

Bachelor of Science, Geology, 1977

completed program and internship to become certified science teacher

completed basic (two-year) Army ROTC program as scholarship cadet

HIGH SCHOOL

Honors Diploma, Arkadelphia High School, Arkansas, 1972

Eagle Scout, Troop 24, Arkadelphia, Arkansas, 1971

REGISTERED PROFESSIONAL GEOLOGIST - Florida PG 996

MEMBER - Association of Ground Water Scientists and Engineers

Florida Association of Professional Geologists

PUBLICATIONS

Stewart, M., and J. Parker, 1992, Localization and seasonal variation of recharge in a covered karst aquifer system, Florida, USA: in Hydrogeology of Selected Karst Regions, vol. 13, International Contributions to Hydrogeology, W. Back, J. Herman, and H. Paloc, eds., International Association of Hydrogeologists.

Parker, J. W., 1992, Surficial aquifer hydrogeology in a covered-karst terrane (unpub. M.S. thesis): Tampa, University of South Florida, Tampa, Florida, 228 p.

Parker, J. W., and M. T. Stewart, 1990, Stage-dependent effective leakance in a karst aquifer, west-central Florida: abstract in Abstracts with Programs, vol. 22, no. 7, 1990 annual meeting of the Geological Society of America, Dallas, Texas, p. A370.

(abstract also in proceedings of 1991 Annual Meeting of the American Institute of Hydrology, Nov. 3-7, Orlando, FL)

Beck, B.F., Jenkins, D.T., and J.W. Parker, 1985, Cause of localized land subsidence at the MacDill Air Force Base, Tampa, Florida. Florida Sinkhole Research Institute Report No. 84-85-4.

Parker, J.W., and T.S. McCain, 1985, VLF Resistivity signature of a fingered plume in a karstic aquifer, abstract in: Florida Scientist, 1985 annual meeting program issue, Volume 48, supplement 1.

PROFESSIONAL DEVELOPMENT

- ❑ Seasonal High Water Table Workshop, Hank Higginbotham of Technical Services Department, SWFWMD, and staff of U.S. Dept. of Agriculture Natural Resources Conservation Service, Brooksville, Florida, March 7, 2001.
- ❑ Ground-Water VISTAS Training, Environmental Simulations International, Inc., Jim Rumbaugh, March 14-15 and June 19-20, 2000.
- ❑ ISGW Integrated Hydrologic Model Training, SDI Environmental Services, Inc., Phillip R. Davis, Tampa, Florida, January 12-16, 1998.
- ❑ Advanced Hydrologic Models, CGN 6933 at University of South Florida; a class on the Florida Hydrologic Model - an Integrated Model, by Mark A. Ross, PhD., P.E., Fall Term, 1996.
- ❑ Expert Witness Training, at Florida Institute of Government, University of South Florida, by Dr. Michael Shahnasarian and District Legal Staff, Nov./ Dec., 1994.
- ❑ Practical Tracing of Ground Water, with Emphasis on Karst Terranes, GSA Short Course by Dr. Jim Quinlan and Dr. Calvin Alexander, Dallas, Texas, October 28, 1990.
- ❑ Environmental Permitting Short Course, by The Florida Chamber, Tallahassee, Florida, January 18-20, 1989.
- ❑ MODFLOW Short Course, by Michael McDonald, USGS, Tampa, Florida, January 20-23, 1987.
- ❑ Numerical Ground-Water Flow Modeling Short Course, by Jim Mercer and Peter Anderson of Geotrans, Brooksville, Florida, July 7-9, 1986.
- ❑ Time-Domain Electromagnetics, New Technology for Mapping the Freshwater-Saline Water Interfaces in the Floridan Aquifer, by Pieter Hoekstra of Earth Technology Corporation, April 18, 1986.

WORK EXPERIENCE

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Water Use Regulation Manager, May 1995 to present

Water Use Permitting Supervisor, 1987-1994

Management of the Water Use Regulation program and associated compliance and enforcement activities by the Brooksville Permitting Department for the portion of the District including and north of Pasco County. Involved with development and use of ground water and surface water sources.

Hydrologist, 1985 - 1987

Evaluation of applications for Water Use Permits throughout the District. Project manager for the Alafia Basin Saltwater Interface Study. Member of the Aquifer Warning Levels work group. Other duties as required.

FLORIDA SINKHOLE RESEARCH INSTITUTE

Geophysicist, 1985

Conduct and interpret a geophysical survey for a land subsidence investigation at MacDill Air Force Base in Tampa, Florida. Supervised by Dr. Barry F. Beck.

U.S. DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE

Geologist, 1984

Organizational and descriptive work toward implementation of the Coastal Barriers Resources Act for Florida. Supervised by Dr. Richard A. Davis, Department of Geology, University of South Florida, Tampa.

HILLSBOROUGH COUNTY PUBLIC SCHOOLS, FLORIDA

Science Teacher, 1977-1983

Earth science teacher at Buchanan Jr. High School, 1978-83.

Life science teacher at B.T. Washington Jr. High School, 1977-78.

SOIL CHARACTERIZATION LABORATORY, UNIVERSITY OF ARKANSAS

Soil Analyst, 1975-1977

Performed analytical procedures for soil samples, for soil characterization and to assist with the research of graduate students. Lab was supervised by Dr. E.

Moye Rutledge, Dept of Agronomy.

WATER RESOURCES RESEARCH CENTER, UNIVERSITY OF ARKANSAS

Student Assistant, 1974-1975

Compilation and mapping of water well data for a limestone aquifer system in southeastern Missouri. Supervised by Dr. H.C. McDonald.

BOY SCOUTS OF AMERICA, NORTHERN TIER NATIONAL HIGH ADVENTURE

Guide, 1972-1974; Brigade Leader and Trainer in 1974.

Led extended canoe trips in Minnesota, Ontario and Manitoba; from the outfitting base near Ely, Minnesota. Base Director: C.S. "Sandy" Bridges.

PROFESSIONAL PARTICIPATION

Florida Land Acquisition and Management Conference, Florida Dept. of Environmental Protection, Haines City, November 16, 2000, panelist for a session on Florida springs issues moderated by Ed Kuester.

Strategies for Special Places, University of Florida School of Law, Gainesville, March 24, 2000, panelist for a session on spring protection strategies moderated by Richard Hamann.

Florida Springs Conference, Florida Dept. of Environmental Protection, Gainesville, Florida, February 8-10, 2000, speaker on "Withdrawals of Water from Florida Springs: Balancing Benefits and Impacts".

Florida Conference on Water Management, St. Augustine, Florida, October 27-29, 1999.

Fourth Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst, with field trip to the Woodville Karst Plain, by the Florida Sinkhole Research Institute, Panama City, Florida, January 25-27, 1993.

Florida Association of Professional Soil Classifiers 1992 Annual Meeting, Ocala, Florida, July 10, 1992; speaker.

American Institute of Hydrology 1991 Annual Meeting, Orlando, Florida, November 3-7, 1991, speaker.

Geological Society of America 1990 Annual Meeting, Dallas, Texas, October 28- November 1, 1990, speaker.

Third Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst, by the Florida Sinkhole Research Institute, St. Petersburg, Florida, October 2-4, 1989

Second International Symposium on Geotechnical Applications of Ground Penetrating Radar, by U.S.D.A. Soil Conservation Service and University of Florida Institute for Food and Agricultural Sciences, Gainesville, Florida, March 6-10, 1988.

1986 Amendments to the Safe Drinking Water Act, by Camp, Dresser, and McKee, Inc., Tampa, Florida, October 28, 1987.

Seminar on Desalinization in South Florida, by National Water Supply Improvement Association and SFWMD, Palm Beach Gardens, Florida, August 20-21, 1987

Second Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst, by the Florida Sinkhole Research Institute, Orlando, Florida, February 9-11, 1987.

Southeastern Ground Water Symposium, by Florida Water Well Association, Orlando, Florida, October 30, 1986.

Focus Conference on Southeastern Ground Water Issues, National Water Well Association, Tampa, Florida, October 7, 1986.

Geological Society of America 1985 Annual Meeting, Orlando, Florida, October 29, 1985.

Florida Academy of Sciences 1985 Annual Meeting, St. Leo College, May 2-4, 1985, speaker, recipient of award for an outstanding student presentation to the Geology and Hydrology Section.

EXPERT WITNESSING

Florida Department of Administrative Hearings, September 21-24, 1999;
Crystal Springs Recreational Preserve, Inc., versus SWFWMD, respondent, and Stewart
Loeblich, intervenor, Case No. 99-1415 (Lawrence P. Stevenson).

Proffered as an expert in HYDROLOGY and GROUND-WATER FLOW; gave testimony
regarding the District's action to deny an application to modify a Water Use Permit to
increase the withdrawals from Crystal Springs in Pasco County for bottled water. At
issue were reasonable demand, quantity and quality impacts, environmental impacts,
and interference with other uses.

Florida Department of Administrative Hearings, August 12 and 13, 1996;
West Coast Regional Water Supply Authority, City of St. Petersburg and Pinellas County,
petitioners, versus SWFWMD, respondent, and Pasco County, Hillsborough County and
Thomas W. Reese, intervenors, Case Nos. 95-1520 through 95-1529 (William Quattlebaum)

Proffered as an expert in HYDROGEOLOGY, WATER RESOURCE MANAGEMENT,
GROUND-WATER FLOW MODELING, and APPLICATION OF GROUND
PENETRATING RADAR; gave testimony in the above subject areas regarding the
District's denial of the renewal applications for four wellfields located in northwest
Hillsborough and southern Pasco Counties; specifically as to the hydrology and
hydrogeology of the area of the four wellfields, and the cause-effect relationships in a
karst landscape associated with pumping from the leaky Floridan aquifer system. I was
the first witness for the presentation of the District's case.

Florida Department of Administrative Hearings, August 8, 1996;
Save the Manatees Club and Friends of the Greenway, petitioners, versus Citrus Recreational
Marina, Inc., and Florida Department of Environmental Protection. (Larry Sartin)

Subpoenaed by petitioners to testify as to the HYDROGEOLOGY of the gulf-to-Ingliis
reach of the defunct Cross Florida Barge Canal, and the potential for saltwater intrusion
associated with the proposed Citrus Recreational Marina.

Florida Department of Administrative Hearings, November 13, 1995;
Charlotte County, Florida, et al, vs. SWFWMD, Phase IV on Existing Rules of SWFWMD,
Case No. 94-5742RP (Stephen Menton)

Proffered as an expert in GROUND-WATER FLOW MODELING and
HYDROGEOLOGY; testified about the water use regulation program of the SWFWMD;
the process by which an applicant provides reasonable assurance that the conditions
for issuance of a water use permit are met, the methods and procedures applied for the
analysis of impacts associated with applications for withdrawals of water for use,
including analytical and numerical models of ground-water flow and other methods.

Florida Public Service Commission, 1994;
Hernando County, Florida vs Southern States Utilities

Testified about FLORIDA HYDROLOGY and the FLORIDAN AQUIFER, at the request
of the Board of County Commissioners of Hernando County, Florida, in their challenge
of SSU's statewide uniform rate structure.

Florida Department of Administrative Hearings, 1988;
Pasco County Resource Recovery Facility, Site Certification PA-87-23

Proffered as an expert in KARST HYDROGEOLOGY and SINKHOLE POTENTIAL;
testified about the hydrogeologic setting of the proposed ashfill/landfill and the potential
for sinkholes at the site as related to the risk of contamination of the Floridan aquifer,
and about the proposed water withdrawals and effects thereof associated with the
project.