

# ***R. Kirk Whitman***

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May 13, 2021

**Sarah.welch@okc.gov**

**Attn: Ms. Sarah Welch**

**OKC Planning Commission**

**RE: Case PC10733**

**Oklahoma City, Oklahoma**

It was nice talking to you the other day. I have attached hereto a copy of a letter sent to Shryle Boettcher with the Planning Commission and a ground water study by Environmental Solutions in opposition of a case # PC-9189 back in 1996. The Oklahoma Planning Commission was not in favor then of 1 acre lots and with this property only a couple hundred feet from the Arcadia Lake water supply I would think that the agency would oppose 21 lots on 29 acres especially since the houses will be from 10' to 50' straight uphill from the lake. We know the old saying, "STUFF runs downhill."

I think it would be wonderful to have some houses on that land but 1.01 to 1.2 acre lots will require the removal of a lot of vegetation and trees from the side of a hill that is between 400' and 700' in width from east to west. The addition would require thousands of feet of sewer laterals one next to the other some would be located less than 50' from the flood zone and a football field from the lake itself based on the plat I saw. Perhaps 2-3 acre lots would work better but 1 acre lots with houses less than 100' apart and less than a 100' from the Corp land leaves very little area for absorption.

Regarding the 40-acre tract to the east I platted prior to any RA-1 restrictions. There are 21 lots on 40 acres. My house is on a 5+ acre lot and some of the other lots that are around 2 acres. There are hundreds of "grand fathered" exceptions throughout the city that don't serve as a precedent.

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. Kirk Whitman', with a large, sweeping loop at the end.

R. Kirk Whitman

**R. KIRK WHITMAN**  
**100 PARK AVENUE, SUITE 1020**  
**OKLAHOMA CITY, OK 73102**  
**TELEPHONE (405) 236-1807**  
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June 17, 1996

Ms. Shryle Boettcher  
3600 South Harvey Avenue  
Oklahoma City, OK 73109

Re: Proposed Little Oaks II  
Subdivision--Ward 7

Dear Madam Chairman:

I want to express my appreciation for your time and for the time of each commissioner present June 13, 1996. I felt my cause was just, based on the information presented and I am glad that the commission voted to that end. I believe your conclusion was correct when stated that Mr. Love's issues and concerns were economics and not environmental.

Out of this process, I realized several things about the permit process and percolation tests that you may or may not be aware of. (1) An engineer or a land surveyor can perform a percolation test. Mr. Love himself performed almost all percolation tests on Little Oaks I according to my conversation with an employee of the City County Health Department. One of the Commissioners on Thursday asked the appropriate question regarding who did the perc tests; however, I believe he did not get the correct answer. It seems unwise to allow a developer to perc test the vary lots he is selling. It reminds me of the fox guarding the hen house. Perhaps it should be required that a third party, unassociated or affiliated with the developer, be required to perform such perc tests. (2) It states in 252:640-1-9 (b) "Installation of subsurface absorption systems where the water table or bedrock is within 4 feet of the bottom of the trench is not recommended". Who is responsible to look at the geographic and geologic makeup of an area prior to approval? What if 50% of the land is suitable for septic and 50% is not?

I spent a considerable amount of time and money learning about septic systems and feel justified in my cause against Mr. Love's application. I do feel; however, that Oklahoma City may want to spend the time and money necessary to determine what in fact is a safe density around a water supply. It may be that 2 acres is sufficient. I would not be inclined to oppose a quality development with lot sizes of 2+ acres. Contrary to what was said at the hearing I would like to have neighbors and I am not an environmental Waco. Further contrary to what was said at the hearing, there are two lots being developed approximately 2,000' due north of Little Oaks in the new addition of South Lake which is east of Midwest Boulevard. Both land owners informed me their lots would not percolate which in Oklahoma City that would require 1,000' of laterals for a three bedroom home and 1,300' for a four bedroom home.

Thank you and all the commissioners for your professionalism.

Sincerely,



**R. KIRK WHITMAN**

cc: ✓ D. Patrick McCoy Joyce Cordum  
George T. Washington Jeana Jones  
James M. Williams Nick Gales  
Richard N. Coyle

P.O. Box 758  
Norman, Oklahoma 73070



(405) 447-3454 Phone  
(405) 447-3444 Fax

June 6, 1996

Re: Addendum to April 12, 1996 letter  
Little Oaks Second Addition

Dear Mr. Whitman,

Per our conversation Environmental Solutions Specialists, Inc.(ESS) did an extensive data search to find information on the effects septic density has on groundwater quality. To aid in this search ESS used the National Ground Water Information Center in Columbus, Ohio to locate pertinent data. Several reports were reviewed which would pertain to your concerns. Listed below is information from two reports which support our conclusions that one-acre density in a loamy sand to sandy soil will greatly increase the probability of the groundwater becoming contaminated with nitrates, bacteria and viruses.

Article #1

Tinker Jr., J.R. An Analysis of Nitrate-Nitrogen in Ground Water Beneath Unsewered Subdivisions. Ground Water Monitoring and Remediation, Winter, pp.141-150.

John R. Tinker Jr. is a certified ground water professional and professor in the Geology Department of the University of Wisconsin - Eau Claire.

The paper evaluated the ground water quality beneath five subdivision utilizing septic systems. Lot sizes ranged from 0.5 to 1.3 acres, septic density ranging from 33 units up to 128 units and the age of subdivisions are between 7 to 17 years. The soils were a loamy sand to sand, a depth to water between 30 feet to 75 feet. Below is the highest nitrate-nitrogen values and their mean lot size.

<u>Subdivision</u>	<u>Mean Lot size ac.</u>	<u>Nitrate-Nitrogen mg/L</u>
Sandy Knolls	0.5	13.0
Pine Grove-Deer Park	1.1	11.6
Oak Park	0.6	21.6
Lowes	1.3	5.7
Bairwood	1.2	9.8

The soils and depth to ground water are comparable to the area around Mr. Whitmans property. The ground water beneath each of the subdivision has been impacted by septic effluent. In three subdivision the nitrate-nitrogen values exceeds drinking water standard(DWS) of 10 mg/L. One subdivision was 9.8 mg/L nitrate-nitrogen which is only 0.2 below the DWS and the remaining subdivision had elevated values.

## Article #2

Yates, M. 1985 Septic tank density and ground water contamination. *Ground Water*, v, 23, no. 5, pp.586-591.

Marylynn Yates received her Ph.D. in Microbiology from the University of Arizona and at the time of this paper was a research associate in the Department of Microbiology and Immunology and Chemistry at the University of Arizona, Tucson, Arizona.

This paper looks at the biological contamination of ground water by bacteria and viruses caused by domestic sewage. "The majority of waterborne disease is caused by bacteria and viruses present in domestic sewage. Septic tanks contribute the largest volume of waste water, 800 billion gallons per year to the subsurface, and are the most frequently reported cause of ground water contamination associated with disease outbreaks." A few studies have actually followed the movement of bacteria and viruses from septic systems to ground water. From the results of these studies it is apparent that pathogenic organisms in domestic waste water can survive in septic tanks, migrate through the leach field, reach ground water and contaminate water supply wells. One of the studies by J.M. Vaughn et al., 1983, in New York, showed that viruses were detected 213 feet from the source in sandy soil. Another study by S.L. Stramer, 1984, in Wisconsin, showed the viruses to move 175 feet from the septic source and were detected in water wells up to 131 days after introduction into the septic system.

## CONCLUSIONS:

Septic systems are the major contributors of waste water to the subsurface.

2. Septic tanks are the most frequently reported cause of ground water contamination; and over one-half the waterborne disease outbreaks in the United States are due to the consumption of contaminated ground water.
3. The most important factor influencing ground water contamination by septic tanks is the density of systems in an area.
4. Several cases of ground water contamination have been in areas of high septic system densities where lot sizes range from less than one-quarter to three acres.
5. Setbacks of 50 feet were found to be inadequate to protect drinking water supply wells.

6. Five subdivisions were studied which had soils similar to the Little Oaks Addition. The nitrate-nitrogen values have increased in the ground water beneath and on the downgradient side of all five subdivisions from lawn fertilizer and septic tank soil absorption systems. In four of the five subdivisions the highest nitrate-nitrogen value equals or exceeds the drinking water standard of 10 mg/L.

If you have any questions or need additional information, please call.

Sincerely,  
Environmental Solutions Specialists, Inc.

A handwritten signature in black ink, appearing to read "Michael D. Jenkinson", followed by a long horizontal line.

Michael D. Jenkinson, RPG  
Environmental Engineer