

**EXPERT REBUTTAL
OF
DAVID J. ERICKSON**

**TO THE EXPERT REPORT
OF
JAMES J. MAUL, LHG**

*Community Association for Restoration of the Environment, Inc.
and Center for Food Safety, Inc.*

v.

Cow Palace, LLC, The Dolsen Companies, and Three D Properties, LLC

Docket No. 2:13-cv-3016-TOR

Prepared for:

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*This Expert Report contains information designated by Defendants as
“CONFIDENTIAL” under the Stipulated Protective Order (ECF No. 82)*

1. I, David J. Erickson, have been retained by Plaintiffs in the above-captioned matter to provide expert testimony about the manure management and storage practices of Defendant Cow Palace Dairy, LLC (“Cow Palace” or “Defendant”), including whether these activities have caused contamination of soils and groundwater. As part of this role, I have been asked by Plaintiffs to review, and rebut portions of, the expert report of James J. Maul (the “Maul Report” or “Report”).

2. Mr. Maul discusses many discrepancies concerning the extent and quality of the EPA ground water study in the area of the Cow Palace; however, neither the Cow Palace nor Mr. Maul have conducted any of the specific investigations that he recommends or corrected any of the perceived problems with the EPA data. While the EPA and definitely the Plaintiffs were limited by the Cow Palace Dairy on the level, degree, and type of investigation that could be performed in potential source areas on the property, there are no restrictions on the Cow Palace Dairy, with respect to drilling, soil sampling, ground water sampling, monitoring well installation, air sampling or sampling of any other media using any method they may prefer. Quite simply, instead of criticizing the existing work, Mr. Maul or the

Cow Palace Dairy could have collected any data they choose to substantiate their criticisms or to rebut EPA's conclusions.

3. Mr. Maul also identifies a potential source of nitrate contamination in the area as sourced from residential septic systems. I have extensive expertise in dealing with septic systems and their potential nitrogen loadings to groundwater. Septic impacts occur in areas with shallow ground water, in areas with housing densities less than 1.5 acres per house, in areas of shallow bedrock, or in areas with limited soil to provide treatment within the drainfield. This area has none of those characteristics.

4. While I discussed the perceived septic system issues in my initial expert report, a summary of waste volumes and relative concentrations provides further perspective on contaminant sources at the site. In the field of contaminant hydrogeology, the first consideration in characterization of the impact is to define the source term: size, concentration, form, release duration and chemical makeup. Based on these data, we can make assumptions as to the actual size and magnitude of the expected impact.

Given the acres of lagoons, the depth to ground water, the extensive piping and conveyance system for waste water, the size of the compost areas and the fact that the liquid waste is sprayed or applied directly to the surrounding properties, the ground water impact should be characterized by a large area (100's of acres) with concentrations significantly diluted as compared to the source.

Known Data

Wastewater Volume

- Cows on the Cow Palace Property = 10,000 (approximate)
- Private septic systems within, 1/4 mile of Cow Palace = 1
- Private Septic Systems within 1/2 mile of Cow Palace = 10
- Cow Palace Wastewater Storage = 30,854,835 gallons/120 days = 257,000 gpd
- Wastewater + Stormwater = 40,884,691/120 days = 341,000 gpd
- Septic System = 50-100 gpd/person and 2.5 persons per household = 125 to 250 gpd

Wastewater Concentration

- Lagoons Total Nitrogen = 1600 mg/l¹
- Residential Septics = 75 mg/l²

Summary Calculations

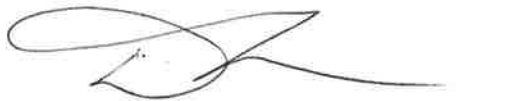
Source	Cow Palace Daily Waste Volume	Residential Septic Daily Waste Volume	Dairy Waste (% of Total)
Volume (gallons)	257,000-351,000	125-250	99.95
Concentration (mg/l)	1600	75	95.5
Load (pounds)	3,423 -4,675	0.078 – 0.17	99.995

1 - Sample result, Lagoon 2, Collected 10/30/13 Site Inspection
 2 – Average Total Nitrogen from SepticNET Study

5. Given these simple calculations with respect to volume, concentration, and load of total nitrogen in the area of the Cow Palace, it is irrational to assume this large area of nitrate impacted ground water could be sources from anything except the Dairy's waste storage and handling practices.

6. Even if we extend the area to a ½ mile radius of the Cow Palace where as many as 10 residential septic systems are present, not only is a majority of the waste volume from the Cow Palace Dairy, but 3 additional Dairies are within that area, further reinforcing the idea that waste handling and nutrient management at these facilities are the source for ground water impacts in the area.

Dated: October 20, 2014



David J. Erickson, PG, CPG
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