

From: [Peter Sardegna](#)
To: [Candice Alvarez](#)
Subject: [External]Fw: Opposed Lake and Mountain Commercial Center
Date: Monday, March 11, 2024 7:35:22 PM

Message from external sender. Use Caution.

Hi Candace,

I would like the email below to be read into record.

reference item #17 for tuesday 03/12/2024 city council public hearing.

Thank you and have a great day
Peter Sardegna

----- Forwarded Message -----

From: Peter Sardegna <psardegna0@yahoo.com>
To: NJOHNSON@LAKE-ELSINORE.ORG <njohnson@lake-elsinore.org>
Cc: JMENDOZA@LAKE-ELSINORE.ORG <jmendoza@lake-elsinore.org>
Sent: Sunday, March 10, 2024 at 01:21:01 PM PDT
Subject: Opposed Lake and Mountain Commercial Center

Hi my name is Peter Sardegna and I live across the street from this property.

Before I state all the facts about how bad gas station are near homes, I would like to know how this got passed in the first place? Why would we place a gas station in the middle of a residential community with zero commercial properties remotely near us? This is one of the few parts of Lake Elsinore that doesn't have high crime and its due to lack of businesses. All the homeless and drug addicts thrive around all the commercial properties especially at night and all the residential communities surrounded by those commercial properties suffer and now you guys are trying to bring this to our community.

Instead of letting someone who owns a 76 gas station in Orange County and I doubt lives in Riverside County let alone Lake Elsinore, why aren't our insanely high taxes used to help the community instead of bring it down. This land could have been a park, soccer field or playground for the kids in our community.

What our community wants and needs is a gas station at Lake street and 15 fwy where there is a bunch of open land and zero residential communities.

Below is a snapshot the property for the proposed gas station and across the street is where I live which is also circled.

Inline image



Now for the statistical facts about gas stations near residential homes.

Health Effects: Is It Safe to Live Near a Gas Station

A number of compounds injurious to human health are released from gas stations during vehicle fueling and from underground storage tank vents. [These compounds include: benzene, toluene, ethyl benzene, and xylene \(BTEX\).](#) Measures to reliably resolve these adverse health effects are not employed at new gas stations.

Benzene is the gasoline constituent most harmful to human health. Adverse health effects of benzene include nausea, cancer, anemia, increased susceptibility to infections, and low birth weight. According to the [World Health Organization Guidelines for Indoor Air Quality](#) *there is no safe level for benzene.* The following research documents the extent of benzene releases from gas stations as well as

adverse health effects:

- A [1993 study](#) published by the Canadian petroleum industry found average benzene concentrations of 146 and 461 parts per billion (ppb) at the gas station property boundary in summer and winter, respectively.
- A [2001 study](#) noted median ambient benzene levels of 1.9 ppb in houses up to 328 feet from a service station.
- A [2003-2004 study](#) conducted in France documented a significant relationship between childhood leukemia and living near a gas station.
- A [2010 study](#) conducted in Spain documented elevated air pollution within 100 meters (328 feet) of a gas station.
- In [2012, Brazilian researchers](#) found that air quality was significantly degraded up to 150 meters (492 feet) from gas stations.

In 2005, the California Air Resources Board probably became the first in the U.S. to recommend a minimum public health safety zone between new gas stations and “sensitive land uses.” The recommendation appeared in [Air Quality and Land Use Handbook: A Community Health Perspective](#). The pre-2005 studies referenced above and other research prompted the Board to recommend a minimum 300-foot separation distance between new gas stations and “sensitive land uses such as residences, schools, daycare centers, playgrounds, or medical facilities.” The State of California is widely recognized as having some of the most effective air pollution control requirements in the nation. Yet even with California controls a minimum separation is still required to protect public health.

The U.S. Environmental Protection Agency echoed concerns about the health risk associated with gas station emissions in their [School Siting Guidelines](#). The USEPA recommended screening school sites for potential health risk when located within 1,000 feet of a gas station.

The [last \(Zoning\) section](#) of this webpage contains a sampling of the public health safety zones for new gas station adopted by other U.S. jurisdictions. Most call for a greater separation than the 300 feet recommended by the California Air Resources Board. The increasing safety zone distances were prompted by the growing body of research showing that adverse health effects extend further and further from gas stations. In fact, a [2019 study](#) of U.S. gas stations found that benzene emissions from underground gasoline storage tank vents were sufficiently high to constitute a health concern at a distance of up to 524-feet. Also, the researchers noted:

“emissions were 10 times higher than estimates used in setback regulations [like that in the California handbook] used to determine how close schools, playgrounds, and parks can be situated to the facilities [gas stations].”

Prior to the 2019 study it was thought that most of the benzene was released at the pump during fueling. A [2015 paper](#) noted the following bit of irony with regard to vapor recovery and harmful emissions from gas station storage tanks:

“It is important to note that vapor recovery at the nozzle can cause vapor releases at the storage tank, because vapors recovered at the nozzle are typically directed into the storage tank. The storage tank, in turn, can “breathe” and potentially release recovered vapors immediately or at a later time. A tank sucks in relatively uncontaminated air as the liquid fuel level drops in the tank due to vehicle refueling, and it releases vapors through the vent pipe into the atmosphere if the gas pressure increases and exceeds the cracking pressure of the pressure/vacuum valve, when fuel evaporates into unequilibrated gas in the headspace.”

The 2015 paper contained the following summary regarding the health implications of living, working or learning near a gas station:

“Health effects of living near gas stations are not well understood. Adverse health impacts may be expected to be higher in metropolitan areas that are densely populated. Particularly affected are residents nearby gas stations who spend significant amounts of time at home as compared to those who leave their home for work because of the longer period of exposure. Similarly affected are individuals who spend time close to a gas station, e.g., in close by businesses or in the gas station itself. Of particular concern are children who, for example, live nearby, play nearby, or attend nearby schools, because children are more vulnerable to hydrocarbon exposure.”

A [study published in 2021](#) documented that adverse health are increased when a neighborhood is near multiple gas stations.

Idling engines, particularly those in large diesel trucks, emit a large quantity of particulates into the local atmosphere. These particulates can pose a significant health risk for those living near convenience store/truck stops.

Control Measures Do Not Resolve Health Threat

The two most common control measures are Stage I and Stage II vapor recovery.

Stage I measures reduce vapor release when gas station underground storage tanks are being filled by tanker trucks. They *do not* control releases during the *99% of time when tanks are not being filled*.

Stage II measures reduce vapor releases when you and I are fueling our cars at the pump. A decade ago most gas pump nozzles were designed to capture vapors released during refueling. The vapors were then sent to the 10,000- to 20,000-gallon underground tanks where gasoline is stored. These Stage II vapor recovery systems were phased out beginning in 2012 as a result of the widespread use of [Onboard Refueling Vapor Recovery](#) (ORVR) systems.

As the name implies, Onboard Refueling Vapor Recovery systems are built into new cars. The system captures vapors during refueling which are then stored in canisters

within the vehicle. A [study published in February, 2020](#), examined the effectiveness of Onboard Refueling Vapor Recovery systems. The researchers found that 88% of vehicles monitored released vapors during refueling despite the presence of Onboard Refueling Vapor Recovery systems.

While the 2020 study may raise a question about health risks to consumers pumping gas, a [2021 study](#) found that this was not an issue. The researchers found that consumers filling their vehicles *under normal conditions* were not exposed to sufficient benzene *from filling alone* to pose a significant health risk. **However, the cumulative effect of benzene released during fueling and from underground storage tank vents remains a cause for concern for those living, working or learning nearby.**

The unfortunate conclusion from these studies is that we cannot rely upon controls

required for new gas stations to resolve the health and safety threat to those who living in the vicinity of a proposed gas station.

Lighting Impacts

Lighting is essential to convenience store [safety](#) and profitability. We're less likely to patronize a poorly lit store while criminals find this inviting. But too much lighting and area residents may suffer glare in their bedrooms or lose their view of the nighttime sky.

There's a phenomenon known as ratcheting where one business installs bright lights. The new lights cause nearby establishments to look darker than before, so they install brighter lights and on the upward spiral goes. Ratcheting can greatly increase light trespass impacts to area residents.

Fortunately new LED lights and other approaches can make a convenience store safe and attractive. The lighting should be fully shielded and follow the latest recommendations of the [Illuminating Engineering Society of North America](#) (IESNA) along with those of the [International Dark-Sky Association](#).

Noise

All of us who have taken our cars in for service are familiar with the many loud noises generated by repair facilities. Tire air guns produce a noise level of [104 dBA and the air chisels used in body shops emits 112 dBA](#). An accelerating diesel truck emits [114 dBA and even 100 dBA while idling](#). Make it a late-night or all-night establishment and you have a use which definitely does not belong near homes.

So how close is too close? CEDS recommends a minimum separation of 300 feet between homes and late-night/all-night stores. However, a site-specific noise analysis may show a lesser setback will adequately protect area homes. Such an analysis should distinguish between rural and urban settings. A nighttime noise level of 55

dBA may be OK in a city or suburb while 45 dBA is more appropriate for rural areas.

How Do Gas Stations Affect Property Value

Do gas stations and convenience stores affect the value of nearby homes? While there appears to be little independent research into this question, here are a couple of articles giving an anecdotal indication:

- [Cemeteries, highways, gas stations](#): “Here’s what decreases your property value: Gas stations, railroad tracks, hydro towers, power stations, and industrial areas — proximity to any of these things definitely won’t help improve your home value, since they can generate and/or attract odors or other substances that could affect your air quality.”
- [10 Industries That Diminish Property Values The Most](#): “2. Convenience Store With Gas Station. People will be driving in and out of your intersection, hanging out at the property, and buying lots of lotto tickets, cigarettes, and beer when they gas up. Although handy, these shops do nothing to help property values and hurt them significantly according to Zillow.com. Although the realtors questioned on the site did not have exact statistics, common sense would show that the increase in robberies, accidents, traffic and pedestrians would add up to decreased property value. Still, many gas stations with mini-markets are springing up like wildfire.”

In the past Federal Housing Administration (FHA) insured mortgages were not available for properties located within 300 feet of tanks capable of storing 1,000 gallons or more of gasoline or other flammable-explosive materials.

River, Lake, Well-Water & Other Aquatic Resource Impacts

Because of the high traffic volume and refueling, convenience stores-gas stations pose an unusually severe threat to ground and surface waters. Adding vehicle servicing facilities increases the threat. [One study](#) found that contaminant levels in convenience store-gas station runoff were 5- to 30-times higher when compared to residential runoff. In [another study](#) researchers detected several compounds in vehicle repair facility runoff which were probable cancer-causing agents. These findings have prompted a number of states and local governments to list vehicle repair facilities as [stormwater hotspots](#). USEPA guidance advises caution with regard to allowing hotspot runoff to infiltrate the soil, particularly in areas where drinking water is obtained through wells. The use of highly-effective stormwater Best Management Practices to treat repair facility runoff before it is infiltrated into the soil.

Fuel storage tanks and pipelines pose another source of contamination, though the design of both has improved dramatically over the past couple of decades. Spillage at the pump is a more likely source of fuel release into nearby waterways. In fact, [Johns Hopkins University researchers](#) found that an average of 40 gallons of gasoline is

spilled at a typical gas station per year at the pumps. The JHU researchers also found that a significant portion of the spilled gasoline can migrate through the concrete pads at many fueling stations.

So how far should a gas station be from a well or surface waters to reduce the likelihood of contamination to a reasonable level? Well, the key question is actually how far can one anticipate that a plume of spilled gasoline will travel underground. One [review of scientific studies](#) of plume travel indicated that the 90th percentile distance is 400 feet. Add another 100 feet for installing grout curtains or other containment measures and a gas station should be no closer than 500 feet to a well, wetland, spring, stream, river, pond, lake, reservoir or tidal waters.

Good & Bad Convenience Store-Station Locations

Given the impacts and corrective measures described above, an optimum convenience store-gas station location would have the following characteristics:

- At least [500 feet from the nearest home](#); or
- Buffered so the store [cannot be seen](#) or [heard](#) from the nearest home;
- To preserve [public health](#) a minimum if 500 feet from homes and 1,000 feet from schools;
- Not within view of [historic resources](#);
- At least [500 feet](#) from wells, springs, streams, reservoirs or other highly sensitive ground or surface water resources;

3.6 Million Gallons Per Year & 300-Foot Insufficient

References to 3.6 million gallons per year and 300-foot setbacks appear to derive from the 2005, California Air Resources Board [Air Quality and Land Use Handbook: A Community Health Perspective](#). Handbook Figure 1-6 below shows how cancer risk diminishes with distance from a gas station pumping 3.6 million gallons per year.



The relationship shown in the graph above may no longer be valid for the following reasons. First, a number of studies have been published since 2005. These studies show that the most harmful compound – benzene – has been detected more than 500 feet from a gas station. Second, California has what are arguably the most comprehensive gas station air pollution control requirements in the U.S. However, it has not been proven that these measures resolve the adverse health effects of gas station benzene emissions.

The following graph is from the California Air Resources Board [Gasoline Service Station Industrywide Risk Assessment Guidelines](#). This graph is based on the quantity of gas pumped by most stations – 1 million gallons per year *not* 3.6. New gas stations outside of California might have Phase I controls. The graph below shows that with Phase I controls an unacceptably high risk of increased cancer cases persists beyond 300 meters (328 feet).



All but older vehicles have [Onboard Refueling Vapor Recovery](#) (ORVR) systems. As the name implies, Onboard Refueling Vapor Recovery captures vapors during refueling. The vapors are then stored in canisters within the vehicle.

A [study published in February, 2020](#), examined the effectiveness of Onboard Refueling Vapor Recovery systems. The researchers found that 88% of vehicles monitored released vapors during refueling despite the presence of Onboard Refueling Vapor Recovery systems.

Minimum 500-Foot Public Health Safety Zone Needed

The research cited above indicates that the most reliable way to protect public health and safety from benzene and other harmful emissions is to guide new gas stations to sites where they will be at least 500 feet from residentially zoned properties, schools, and other locations where people live, learn or work. CEDS research frequently shows a third to half of potential gas station sites can meet a 500-foot public healthy safety zone. In other words, adopting this safeguard allows us to gain the benefits of new gas stations without jeopardizing the health of our neighbors.

Examples of Other Safeguards

Here are examples of other safeguards:

- [New Hampshire](#): DES's rules for the siting of UST (Underground Storage Tank) systems at new sites include the following setbacks:
 - 500' from public water supplies (PWSs)
 - 250' between gasoline USTs and private wells
 - 75' between any UST and surface water.
- [Citrus Heights, CA](#): Distance requirements. No on-sale or off-sale liquor establishment shall be maintained within 500 feet of any other on-sale or off-sale liquor establishment, or within 500 feet from the following "consideration points": Schools (public or private); Churches or other places of worship; Hospitals, clinics, or other health care facilities; and 4. Public parks and playgrounds and other similar uses.
- [Baltimore County, MD](#): A finding by the Zoning Commissioner of the presence of one abandoned fuel service station, as defined in Section 405.3, within a one-half-mile radius, or two such stations within a one-mile radius of the proposed fuel service station establishes that there is no need for the proposed use, unless rebutted to the Zoning Commissioner's satisfaction by market data.
- [East St. Louis, Illinois](#): All new gasoline service stations shall be located and constructed not less than 300 feet apart, and no new gasoline service station shall be built unless enclosed in a garage.
- [Ford Heights, Illinois](#): It shall be unlawful for any person to locate, build, construct or maintain any public garage or gasoline filling station, the storage of filling tanks, pumps or devices of which are used for the purpose of storing, drawing off or discharging gasoline, oil or other volatile inflammable liquid, within 150 feet of any school, measured from the nearest point of the tank or filling or discharging device used in connection therewith, to the nearest point of any such building.

If you're concerned about a proposed establishment and your local zoning ordinance lack these safeguards, then consider asking local elected officials for an amendment. If a convenience store-gas station application has or is about to be submitted then consider asking that it and all other applications be put on hold while officials study the best way to update zoning requirements.

Existing Gas Station-Convenience Stores & Reducing Impacts

If you live within a thousand feet of a gas station or your children attend a nearby

school, then consider calling for measures that can reduce impacts.

Closing An Existing Gas Station Near Impossible, But Winning Changes is More Doable

As you've likely guessed, stopping a gas station where construction has started or is completed is nearly impossible. However, convincing the owner to voluntarily adopt measures that reduce or even fully resolve neighborhood impacts is easier to achieve. It's even possible to convince government agencies to require impact reduction measures.

Verify That All Permits-Approvals Have Been Issued & Are Being Complied With

If a gas station is under construction then the first step should always be to verify that all permits and other approvals have been granted. If one or more permits-approvals are yet to be issued, then it may be possible to get impact reduction measures added as permit conditions. And there's always a remote chance that some unknown fact may emerge that could result in blocking the issuance of a remaining permit-approval. At the very least, contesting issuance could gain the leverage needed to convince the owner to implement impact reduction measures.

Examples of Impacts & Reduction Measures

Here are a few examples of impact reduction measures:

- Usually the [greatest health threat posed by a gas station is the benzene](#) released to the air from underground fuel storage tank vents and at the pump. Benzene can increase the risk of cancer for those living, learning or working within 500- to 1,000-feet. There are [measures that can prevent most of the benzene from being released](#) but they can be expensive costing \$60,000 – \$100,000 to install and \$1,000/year to maintain.
- If [alcohol will be sold at a gas station-convenience store then this may increase the likelihood of crime](#), especially if it is sold as carry-out as opposed to onsite consumption only. This impact can be reduced by prohibiting alcohol sales or at least limiting it to beer and wine.
- If children pass by a convenience store on their way to and from school then the [junk food sold in the store can add to childhood obesity](#) as well as pose a respiratory health issue due to tobacco or vape sales.
- A gas station can also impact neighborhood residents due to [light trespass, increased fire-explosion danger, noise, loss of property value, groundwater or aquatic resource impacts, or cause traffic issues](#).

If you loved this community as much as my family and I do, you wouldn't approve this property being built.

Any questions regarding this email do not hesitate to ask.

Peter Sardegna

