

A Community Alert:
Risks From Oil Trains &
The Phillips 66 Rail Spur Project
Keeping Explosive Canadian Tar Sands Oil
From Riding the Rails Through Santa Barbara County

By Santa Barbara County Action Network (SB CAN)

ALERT SUMMARY:

1. Santa Barbara County has lots to lose from our current oil train traffic, should there be an oil train disaster. An accident puncturing just four rail tank cars along the coast would create a larger oil spill than the recent Refugio pipeline disaster. An oil train wreck with exploding tank cars can create a deadly mile-wide "blast zone" through our cities.
2. Let's not increase our current risk by starting to bring explosive Canadian tar sand oil (the diluted bitumen tar sands oil, sometimes and in quoted material in this paper, referred to as dilbit) up our coast to enrich Phillips 66 Santa Maria Refinery shareholders.
3. To reduce future oil train traffic through Santa Barbara County, write a letter of opposition to the San Luis Obispo County Planning Commission and the Board of Supervisors opposing the Phillips 66 Rail Spur Project. Tell them we have too much to lose.

SANTA BARBARA COUNTY ALREADY HAS AN OIL TRAIN PROBLEM:

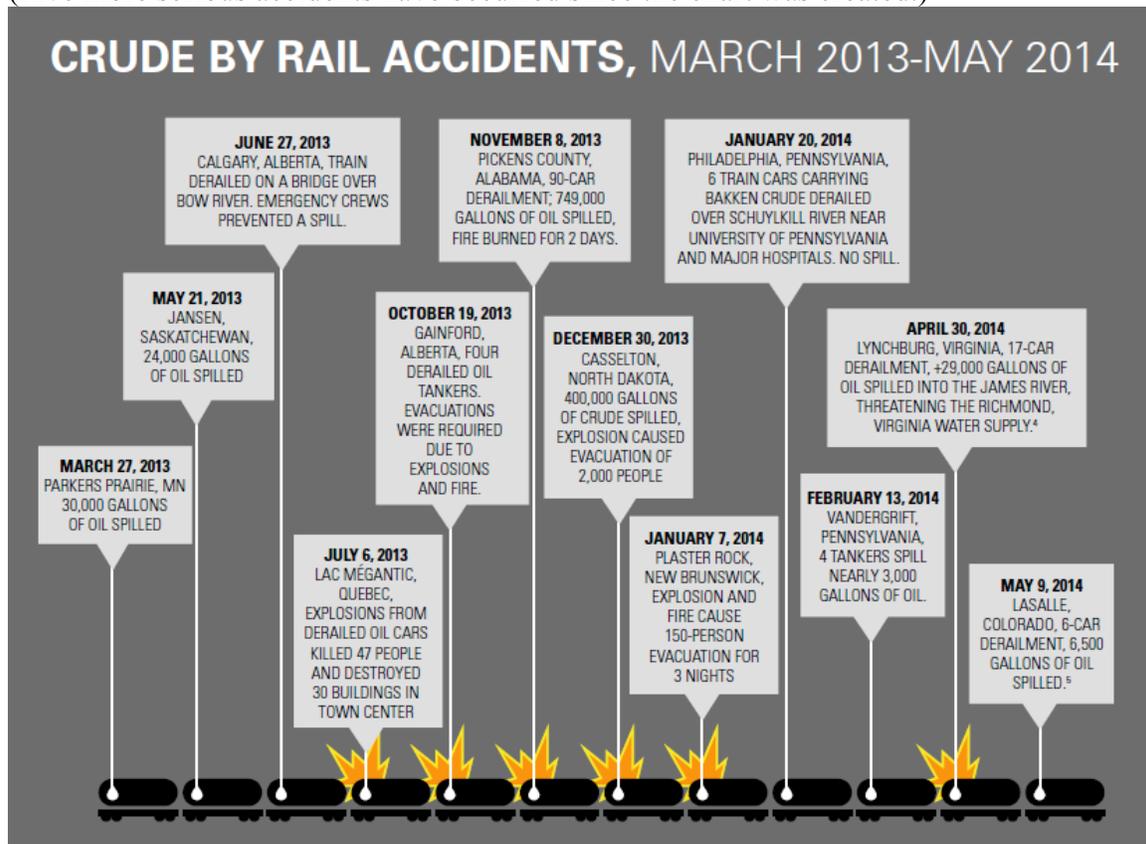
Trains carrying flammable oil from the San Ardo oil field north of Paso Robles and trainloads of liquefied petroleum gas are already running south through eleven Santa Barbara County communities along the Union Pacific Coast Line. They are under the jurisdiction of the federal Department of Transportation and legally neither Santa Barbara County nor the endangered cities along the rail line have the authority to stop them from coming or reduce their numbers. Oil train accidents are occurring in California. A report about our state's oil train record found incidents involving oil-by-rail cars increased from three in 2011 to 25 in 2013. There were 24 incidents within the first six months of 2014, and oil spills from rail cars increased from 98 in 2010 to 182 in 2013. (Oil by Rail Safety in California Preliminary Findings and Recommendations, State of California, Interagency Rail Safety Working Group, June 10, 2014.)

<http://sd27.senate.ca.gov/sites/sd27.senate.ca.gov/files/Oil%20By%20Rail%20Safety%20in%20California.pdf>

WE CAN DO SOMETHING: There exists today, however, a unique window of opportunity for Santa Barbara County, our impacted coastal cities, governmental agencies, and impacted school districts, to take action to significantly reduce the number of future oil trains coming through our county. We can oppose the proposed Rail Spur

Project at the Phillips 66 Santa Maria Refinery on the Nipomo Mesa and encourage San Luis Obispo County officials to deny the project. The Rail Spur project would allow up to five trains per week of up to 80 cars each to unload highly explosive Canadian tar sand oil at the refinery. Some or all of these nearly mile-long trains could be routed through the Union Pacific Los Angeles terminal operation and run north through Santa Barbara County to the refinery. This increase in oil train traffic through Santa Barbara County would dramatically increase current levels of risk. Opposition to the project would reduce the risk of an incident like this one in Lynchburg, Virginia (below) or the deadly consequences of the explosions in Lac Megantic, Quebec, where blocks of the downtown were destroyed and 47 lives lost.

(Five more serious accidents have occurred since the chart was created.)



THE BAY AREA HAS TAKEN ACTION AGAINST THE PHILLIPS 66 RAIL SPUR PROJÉT...AND SO CAN WE: This local SLO project is of such concern to the numerous cities on the rail lines between Canada and San Luis Obispo, that the Bay Area's impacted communities of Richmond, Berkeley, Oakland, Hayward, Fremont, Santa Clara and San Jose commissioned a study about the Rail Spur Project. It concluded that there is a probability of 3.3% annually that there could be an oil train derailment in the Bay Area. Just looking at the most highly populated stretches, including Berkeley, Emeryville, Oakland, Santa Clara, San Jose and others, the estimated likelihood of at least one derailment over the next 30 years is approximately 28%, assuming no increase in shipping volumes.

The Bay Area analysis, by Hinman Consulting Engineers, Inc., concluded "a reasonable estimate given a derailment along a populated stretch of track and an impact zone of 1,000 feet on either side, is that an average of 117 households could be destroyed along with \$244 million in property value. These estimates do not include loss of revenue, environmental cleanup costs, loss of human life, or other societal costs." (http://hce.com/Library/documents/New_Oil_Transportation_Risks.pdf)

Locally, a community organization, Mesa Refinery Watch, has identified numerous valid concerns about the project in a short power point presentation (website address found at the end of this report). At this time, SB *CAN* will not address these myriad issues, but focus instead on what is at risk in Santa Barbara County and encourage you to watch the excellent power point presentation.

WHAT'S AT RISK FROM A RAIL DISASTER IN SANTA BARBARA COUNTY:

The impact zone from an oil train disaster includes several zones of damage. The closest area to a train wreck, is the half-mile blast zone on either side of the tracks, which is shown with red on the map below. It is the minimum evacuation zone for a derailment without fire. This is where nearly all the deaths occur, if there are tanker explosions and fire. Five bodies from the Lac Megantic, Quebec oil train accident blast zone were never found and considered vaporized.

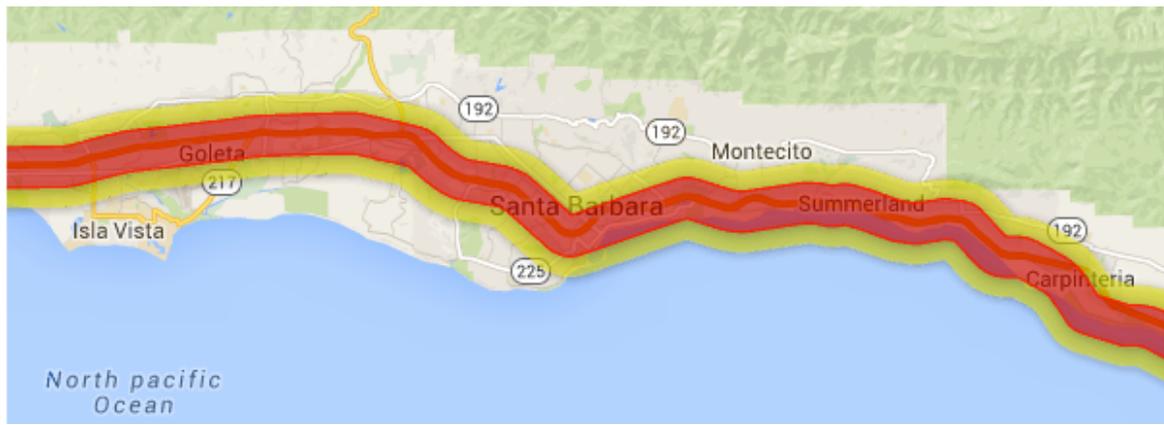
The Blast Zone is where the concussive force of the blast causes injury or death (the Bureau of Alcohol, Tobacco and Firearms (ATF) indicates a Lethal Air Blast Range of 600 feet from an explosive semi trailer with explosive cargo). The blast zone is where most of the serious burns to exposed body surfaces occur; where buildings collapse; where debris, broken glass, tanker metal fragments can fly through the air causing injury to evacuating survivors, first responders, and unsuspecting onlookers. It is where serious toxic smoke inhalation injury takes place and when common sense to flee the area is overcome by the desire to help the injured.

These fires are dangerously hot. The Telegraph News and Media Website reported that during the oil train fire near Casselton North Dakota, in minus 18 degree Celsius temperatures, one could feel warmth even inside a house that was a half-mile from the fire.

In the blast zone, if one tanker catches fire it acts like a blowtorch on adjacent tankers, causing a succession of explosions, each with huge fireballs, toxic smoke and flying debris. Any tankers exposed to heat that are filled with Liquid Petroleum Gas can vent toxic non-odorized gas leading to possible asphyxiation, prior to explosion. A major fire of LPG will also release deadly carbon monoxide. Even "empty" tankers drained of liquid contain oil residue and fumes and are explosive, having an increased air/fuel mixture. The LP Gas industry agrees that an empty LP container is actually more explosive than a full one.

According to Guadalupe Police Chief Hoving, an oil tanker in a "directional explosion" was known to have been launched over a mile from the track, landing a considerable distance outside the half-mile blast zone.

The one-mile evacuation zone (on either side of the track) shown in yellow is the recommended minimum by federal agencies in case of a derailment with fire. Depending on the severity of the incident, this zone can sustain broken glass and building damage from the shock wave. The ATF considers 7,000 feet a Falling Glass Zone, from an explosion of a semi trailer loaded with explosives. That is well over a mile. Officials in the Casselton, North Dakota oil train explosion and fire, strongly recommended evacuation of residents five miles downwind of the fire.



1. ELEVEN SANTA BARBARA COUNTY COMMUNITIES IN THE BLAST ZONE:

Eleven Santa Barbara County communities are located within the two-mile wide blast zone (a mile on either side of the tracks) the official U.S. Department of Transportation potential impact zone in case of a wreck involving an oil train fire: the Rincon neighborhood, Padaro Lane neighborhood, Carpinteria, Sandyland, Summerland, Montecito, Santa Barbara, Goleta, Hollister Ranch neighborhood, Casmalia, and Guadalupe. A major accident can have profound impacts on residents and the community itself.

Within these communities, there are numerous rail crossings where vehicles and trains can collide with an oil train, many of which are unprotected. Also there are numerous crossings where pedestrians regularly cross the tracks and have created footpaths that are potential accident sites, as engineers risk possible derailment at they attempt to brake the train to avoid killing pedestrians. There are over 70 of these crossings in the county, when you include dirt road agricultural crossings, all of which increase the risk of a mishap of consequence.

The worst-case example of an oil train wreck involves an oil spill, a spark, a fire, and subsequent explosions. What is at risk in our communities are lives, resident and visitor injury, loss of homes and businesses, possible loss of municipal economic stability, destruction of community landmarks and history, loss of unique environmental resources, injury for our first responders, loss of tourism and other business income and much more.

2. A HUGE HUMAN COST: In populated areas, oil train fires can lead to the loss of life, (48 died in the 2013 Lac Megantic, Quebec oil train disaster). Personal injury comes from: the shock wave of the explosion; collapsing buildings; flying debris; possible asphyxiation from leaking toxic gases; burns to skin and internal burning from inhaling hot smoke, evacuation of "high risk" hospital patients and the elderly; and, last but not least, first responders doing their risky jobs. Health impacts come from crude oil spills (petroleum exhibits both toxicity and carcinogenicity); and respiratory problems come from inhaling small particulate mater, toxic gases, etc., found in the thick smoke.

There is emotional trauma to both adults and children exposed to the disaster. Employees forced to evacuate the three jails in the one-mile zone, zoo employees trying to save animals, staff trying to evacuate Alzheimer's facilities, and hospital employees dealing with evacuating high-risk ICU patients all could experience stress disorders. There would be inconvenience and stress from evacuation and relocation if homes and businesses were destroyed; and stress caused by closed highways and roadways during and after the emergency.

Visualize the human cost of an oil train wreck, fire, and exploding oil tankers without adequately trained and equipped first responders ready to contain an expanding hazardous materials fire. Would there be the massive amounts of required special foam retardant to fight an oil fire? Think of the compounding problems if Cottage Hospital, located in the blast zone about 1/4 mile from the track, needed to be evacuated and was unable to treat survivors, or even worse, suffering major damage. We could loose the only burn unit in Santa Barbara County and burn patients would be routed to the San Fernando Valley, which is the next closest burn unit.

Cautious public officials have evacuated residents and closed business up to ten miles from an oil fire. Goleta Valley Hospital is about five miles from Cottage Hospital and there could possibly be an accident where both hospitals could need to be evacuated at the same time and are unable to care for the injured.

There are over 20 schools located in Santa Barbara County within the half-mile distance from the railroad track in the blast zone, and more with in the impact zone. Depending on the disaster location, hundreds of school children would go through the trauma of evacuation, with some possibly needing medical attention. There are also a number of senior citizen facilities and nursing homes in the blast zone, impacting older residents needing special assistance to evacuate.

If the Rail Spur Project goes through, the ongoing operation puts North Santa Barbara County residents down wind from the refinery at an ongoing health risk from the major toxic diesel emissions generated at the unloading facility, where multiple train engines will idle.

3. WHAT ABOUT ALL THE BLACK SMOKE? It is commonly known that smoke inhalation is the leading cause of death from fires. According to the "Explainer Section"

of the slate.com website, an oil fire tends to burn very black because most of the fuel is converted into elemental carbon, which forms into tiny particles that absorb light. Because few fire departments are either trained or equipped to extinguish an oil train fire, they are normally left to burn out, a process that can take up to a week and generate massive amounts of smoke.

Depending on wind conditions, the plume of smoke can rise many hundreds or even thousands of feet and disperse diluted smoke and relatively low concentrations level of pollutants miles downwind. A study of military personnel serving in Kuwait exposed to oil fire smoke found "the signs and symptoms at this level of exposure include 'black mucous or material' in eyes, nose, or mouth; eye or mucous membrane irritation—often with nasal discharge and tearing, shortness of breath, hoarseness, and cough."



However, if there is an inversion layer or no wind, the plume can "touch down" leaving high levels of soot, hugging the ground at breathing levels. This photo above of the Lac Megantic, Quebec, fire depicts how visibility can extend only 10-15 feet. According to the "Minnesota Department of Health Fact Sheet: Health Concerns Associated with Oil Fires", those in the immediate vicinity of an oil train fire can experience:

Inhalation of large amounts of gases, vapors, fumes, and smoke [which] can affect tissues of the respiratory tract and produce effects ranging from minor immediate irritation, to rapid or delayed airway and lung diseases. Corrosive or irritant species can produce serious effects. The onset of some dangerous conditions may appear suddenly after a period of time following exposure has elapsed. Individuals directly exposed to the heat and smoke of an oil-fire should be evaluated by a medical professional for signs of thermal and chemical burns and acute inhalation exposure.

Advanced public education and successful efforts toward evacuation and sheltering in place should lessen the health risks from smoke inhalation. Of special concern is the impact of inhaling soot particles of one micron or less by the most vulnerable populations: those under the age of 11, over the age of 70, and people with asthma, COPD, and emphysema.

4. SANTA BARBARA AREA KEY STRUCTURES AT RISK IN THE IMPACT

ZONE: All of the facilities listed below could need to be evacuated depending on the location of an accident and could be at risk of damage. There would be special difficulty with evacuating hospital patients, zoo animals, and prisoners from the three jails under the best of circumstances, let alone when immediately threatened by fire.

- Thousands of homes ranging from modest tract residences to multi-million dollar beach estates.
- Many hundreds of businesses, ranging from shop-front stores to multi-million dollar industrial sites.
- 22 schools.
- Two hospitals.
- Three Amtrak stations.
- Nine fire department facilities.
- The Santa Barbara Airport (some runways are in the blast/shrapnel zone).
- Santa Barbara County Court House (on the edge of the 1/2-mile blast zone).
- Santa Barbara County Buildings.
- City of Santa Barbara City Hall/Police Department.
- Carpinteria City Hall.
- Goleta City Hall.
- Public buildings in numerous parks.
- The Santa Barbara Pier and Harbor.
- Historic buildings in many communities, especially Guadalupe.
- Several golf course clubhouses and infrastructures.
- Hotels in Montecito, lower State Street, Santa Barbara Harbor area, and the Bacara Resort.
- Earl Warren Showground.
- Santa Barbara Juvenile Jail.
- Santa Barbara County Jail Medium Security Facility.
- Santa Barbara County Jail.

Are Santa Barbara County's and our municipal first responders ready to protect these facilities from an oil train disaster like the one below in West Virginia, featured on the cover of the Center for Biological Diversity's report "RUNAWAY RISKS: Oil Trains and the Government's Failure to Protect People, Wildlife and the Environment?" (See last section for details.)



5. ECOLOGICALLY SIGNIFICANT RESOURCES AT RISK:

- Groundwater/drinking water resources for eleven communities can be impacted by a crude oil spill.
- Surface water in creeks and rivers, as well as ocean water at numerous locations along the Union Pacific Coast Line are vulnerable to the heavy tar sands oil, which, when spilled into natural waters, gradually sinks to river or ocean bottoms. The April 2015 edition of the "Santa Lucian", the publication of the San Luis Obispo Chapter of the Sierra Club reported that five years after a tar-sands oil spill and clean up costs exceeding \$1 billion, approximately 20% of the oil is still in the Kalamazoo River in Michigan, and the river and wetlands are damaged beyond repair. The May 2015 Refugio beach-side oil pipeline break shows the impact of an amount of oil equal to less than four rail tanker cars.
- In California, oil trains pass within a quarter-mile of protected critical habitat for 57 threatened or endangered species, including the California tiger salamander, California red-legged frog, piping plover, bull trout and several imperiled species of salmon, steelhead and sturgeon, according to The Center for Biodiversity. Many of these species are found by the rails in Santa Barbara County.
- Any of over 55 creeks and unique coastal canyon ecosystems crossed by the tracks could suffer an oil spill and irreparable damage: Toro Canyon, San Ysidro Creek, Cold Springs Creek, Mission Creek, San Jose Creek, Las Vegas Creek, San Antonia Creek, Tecolote Canyon, Gato Canyon, Caguda Del Capitan, Caguda Del Refugio, Las Flores Canyon, Tajiguas Creek, Arroyo Quemado, Arroyo Hondo, Canyon de la Posta, Canyon del Molino Canyon San Onofre, Canyon Del Agua Caliente, Canyon del la Quarta, Canada De Santa Anita, Arroyo Bulito, Canada del las Agujas, Canada de las Llegua, Canada del Cojo, Damsite Canyon, Wood Canyon, Black Canyon, Jalama Creek and Canyon, Long Horn Canyon, Sudden Canyon, Canyon del Morida, Canyon del Rodeo, Oil Well Canyon, Grey Canyon, Canada Honda Creek., Spring Canyon, Bear Creek, Canyon Tortuga, San Antonia Creek, Santa Ynez River, and Santa Maria River.

- Most of the 100 miles of rich marine resources on the coastline of Santa Barbara County are at risk from oil spills along the railroad line. Many of these North County beach areas are inaccessible by road, compounding the job of spill containment, fire fighting, and environmental clean up. Of special concern are the over 50 railway bridges and trestles along the coast, crossing Santa Barbara County creeks and canyons. They can put our marine resources at risk of oil spill if structurally unsound. A minor tilting of such a structure could cause a derailment and an unfortunate chain of events. According to the documentary by the Weather Channel, “BOOM: North America's Explosive Oil-By-Rail Problem:”

“There is little oversight of railroad bridges. The Federal Railroad Administration has set no engineering standards for railroad bridges, relying almost entirely on individual railroads to inspect, maintain and repair their own bridges and trestles, some of them built more than a century ago. State and local governments can’t independently assess the condition of local rail infrastructure because their inspectors don’t have access to the railroads’ design and maintenance records, or to the tracks, trestles and bridges themselves. The railroads consider such information proprietary; the tracks and bridges are their private property and disclosure of those materials is voluntary. According to FRA accident records, only 58 train accidents were caused by the structural failure of railroad bridges for the 27 years from 1982 through 2008. But most of the surge in oil has come since then. For the public or even local governments, confirming that a specific bridge is safe enough to handle the new oil trains is almost impossible.

“Tar Sands Oil clean up, in aquatic environments, is complicated by the fact that it does not float on the water like most conventional oils, but sinks beneath the surface. According to June 26, 2012, Inside Climate News: "Existing clean up procedures and equipment are designed to capture floating oil... Nancy Kinner, a professor of civil and environmental engineering at the University of New Hampshire who studies submerged oil, said "When you can't see [the oil], you don't know where it is, so it's very hard to clean it up". ... the average cleanup cost of every crude oil spill from the past 10 years was \$2,000 per barrel. The Marshall (dilbit Kalamazoo River) spill has cost upwards of \$29,000 per barrel."

- Wildfire could result from an oil train fire and cause extensive damage to wild life, wild lands and important wildlife habitat in the County, especially in Los Padres National Forest.
- The Carpinteria Bluffs Nature Preserve.
- The Carpinteria Salt Marsh.
- The Bird Refuge.
- The Santa Maria River and the sensitive wetlands, and estuary ecosystems at the coast, located four miles downstream from the tracks at the Guadalupe Dunes.

6. UNIQUE RECREATIONAL RESOURCES AT RISK IN THE BLAST ZONE:

- State Parks: Carpinteria, El Capitan, Refugio, Gaviota.
- Point Sal State Beach.
- County and city parks: Rincon Park, Tar Pits Park, Salt Marsh Park, Lookout Park, and Jalama Beach County Park.
- Miles of one-of-a-kind beaches.
- World-renowned surf breaks.
- Los Padres National Forest (at risk of wildfire from oil train accident).
- Golf courses.
- The Polo Fields.
- The Santa Barbara Zoo.
- The Harbor, State Street recreational resources, municipal pool, tourist shopping areas, and restaurants all near the Amtrak Station.

7. AGRICULTURAL RESOURCES IN THE BLAST ZONE ARE ALSO AT RISK:

The Greenhouse area of Carpinteria could suffer from any blasts, fires, or shrapnel-like material. South County field crops along the tracks could be damaged directly by oil spill, fire, or toxic ash or smoke damage. North County field crops along the tracks from Vandenberg to Guadalupe could suffer the same fate.

8. IMPACT ON FISHERIES

- Fisheries would be closed for miles around any oil spill that reaches the ocean, impacting surf fishing and skin diving from the shore as well as commercial and recreational fishing and diving from boats. Loss of profits and earning capacity from local commercial fishing operations such as trawlers, crabbers, etc., could be significant. Recreational charter fishing boats operating out of Santa Barbara Harbor could be affected as well as whale watching, depending on the season. There would also be additional agency costs for monitoring and enforcing the fishery closure.
- It is difficult to put a dollar value on dead and impacted wildlife/birds, marine mammals, fish, crabs, lobster, abalone, other shellfish, and other tide pool species, etc. Some of these impacts can be multi-generational. These are valuable public resources lost.

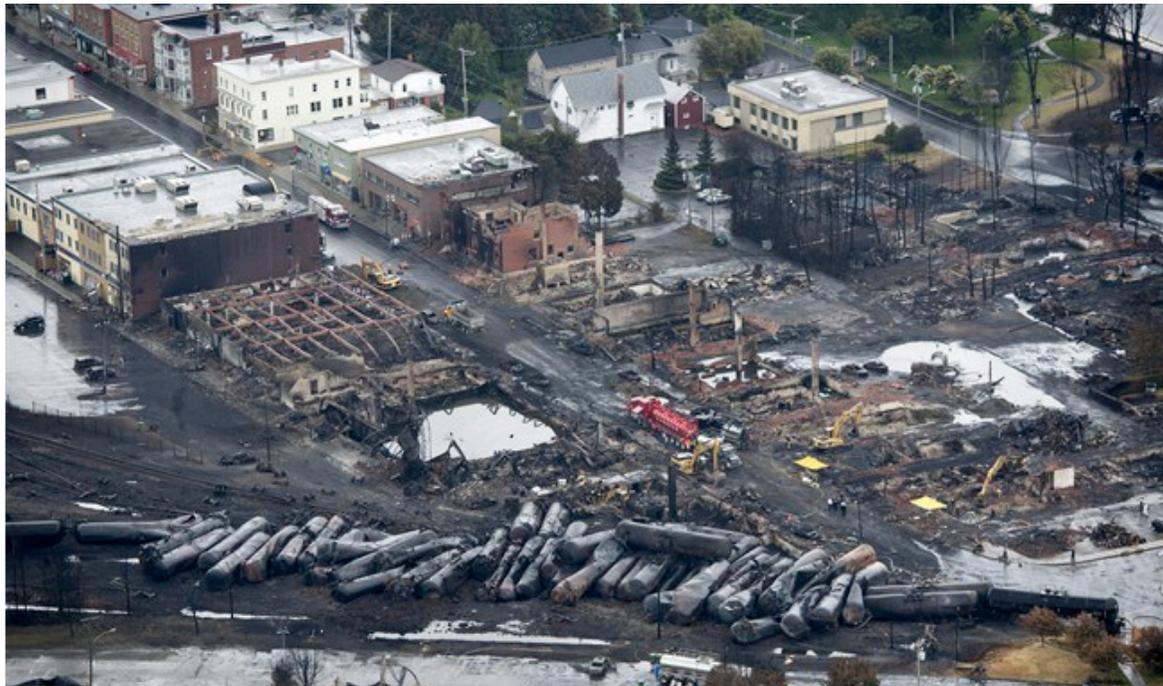
9. OTHER ECONOMIC IMPACTS:

There would be short- and long-term economic impacts from a train derailment, fire and explosion, or oil spill. The cost of clean up from a large oil spill impacting beaches, ocean, creeks or rivers is extensive. The May 2015 Refugio pipe line break initial response and clean up involved approximately 250 professionals at the federal, state and local level from over a dozen agencies. Additional long-term costs are incurred with ongoing clean up and restoration.

There is the immediate economic loss to business while major roads, like Highway 101, are closed at the same time rail deliveries stop. Goods will not be moving in or out of the disaster area effectively for some time. Tourists will not be coming into an area with toxic smoke, congested traffic or fouled beaches. The May 19, 2015 Refugio oil pipeline

break showed how tourism outside the impacted area even suffers. FAA flight restrictions might be imposed if smoke blows toward the airport. There is the immediate cost for evacuation shelters and of longer term housing for displaced families. There is lost income from businesses while they wait to settle insurance claims and reopen or rebuild, hardships for those who are underinsured or not insured at all, and tough times for those who got inadequate insurance settlements and are unable to rebuild homes or reopen businesses. Crop economic losses could also occur for the agricultural sector.

To give an idea of scale, the 2013 oil train fire pictured below in Lac Megantic, Quebec, destroyed 115 businesses.



Governments will have sustained the costs of first responders, evacuation, asset protection at the time of the fire, environmental clean up, and the containment cost of a possible wild land fire. There will be reconstruction cost of municipal buildings, park facilities, schools, hospitals, Amtrak facilities, etc. There will also be the likely expense of legal action to attempt to collect adequate reimbursement from Union Pacific for all of these expenses.

The Weather Channel's documentary "BOOM" covered an April 2013 National Transportation Safety Board meeting where Ed Hamberger, head of the Association of American Railroads stated:

When things do go sideways, the railroad companies compensate communities for damages to person or property. Yet the small railroad that operated the train that derailed in Quebec declared bankruptcy almost immediately. It had only \$25 million in liability insurance and was facing liabilities that might reach \$2 billion. Almost a year and a half after the disaster, it remains unclear who will pay to

rebuild the town, clean up the oil and compensate the families of the 47 people who were killed.

According to the April Santa Lucian, Union Pacific, which operate our coastal main line, is one of several railroads suing California to repeal a new state law requiring railroads transporting crude oil to obtain a certificate of financial responsibility from the state as proof that they have enough money to clean up spills and cover damage.

After the dust settles, there could be possible long-term loss of property value due to losing tourist appeal, ending up with numerous empty or abandoned properties where rebuilding is not feasible, or lack of government funding for replacement school facilities, city buildings, park facilities, etc. Potential residential or business buyers might even wonder if lightning could strike twice in the same location in a rebuilt blast zone area.

10. ON-GOING PROBLEM OF EMERGENCY-VEHICLE DELAYS: In Santa Barbara County, along the Union Pacific Coast Line, there are dozens of "at-grade crossings" where oil trains of over 100 tank cars can hold up street traffic for extended periods of time. This can be life threatening if you are being rushed to the hospital and get caught behind one of these trains, delaying needed help. The Washington Physicians for Social Responsibility's *Position Paper on Crude Oil Transport and Storage* states: "Emergency vehicle delay at railroad crossings could result in increased fatalities. Five to ten minute delays in emergency medical service (EMS) can critically alter chances for survival, particularly in the case of cardiovascular and respiratory emergencies as well as trauma. The additional blocked traffic at train crossings could make the difference between life and death."

(<https://drive.google.com/file/d/0BxmHEo6N5zkRMG5PMk5DTjVvbUk/view?pli=1>)

11. NORTH COUNTY RESIDENTS WILL BE EXPOSED TO INCREASED ON GOING AIR POLLUTION FROM THE RAIL SPUR PROJECT: Diesel emissions from idling train engines while unloading crude oil and loading refinery products will move downwind from the refinery into North Santa Barbara County. The Washington Physicians for Social Responsibility, in its *Position Paper on Crude Oil Transport and Storage*, indicates there are major health consequences to decreasing North County air quality: Their study found that increased air pollution, including diesel particulate matter:

- Accounts for the majority of air-toxic cancer risks in the Puget Sound area;
- Increased risks of cancers, particularly lung and breast cancer;
- Lower infant birth weight and increased risk of respiratory death in first year of life;
- Impaired pulmonary development and increased risk of lung disease in infants, children, and adolescents;
- Increased risk of neurodevelopmental and behavioral disorders in children;
- Increased risk of asthma diagnosis, exacerbation of symptoms, and asthma-related hospitalizations;
- Increased risks of acute cardiovascular and cerebrovascular events;
- Enhanced reactions to airborne allergens and immune system impairment; and

- Increased risks of acute and chronic obstructive lung disease, systemic inflammation, and overall risk of disease and mortality.
- <https://drive.google.com/file/d/0BxmHEo6N5zkRMG5PMk5DTjVvbUk/view?pli=1>)

PLEASE TAKE ACTION! Let the San Luis Obispo County Planning Commission know you don't want them putting Santa Barbara County resources at risk by increasing oil train traffic. SB *CAN* urges you to join the officials and entities below that have urged San Luis Obispo County to deny this Phillips 66 Rail Spur Project:

- Santa Barbara County 3rd District Supervisor.
- Cities of Carpinteria, Berkeley, Camarillo, Simi Valley, San Jose, San Leandro, Davis, Moorpark, Oakland, Richmond, Monterey, Ventura, and San Luis Obispo.
- Counties of Santa Cruz, Ventura, and Alameda County.
- Ventura Unified School District, Berkeley Rent Stabilization Board, Alameda Health Services, Pleasant Valley School District, San Leandro School District.

Let's work together to reduce oil train traffic through Santa Barbara County by opposing the Phillips 66 Rail Spur Project. Keep explosive Canadian tar sands oil off the Union Pacific Coast Line.

Send your letter of opposition to: San Luis Obispo County Board of Supervisors and Planning Commission at: 1055 Monterey Street, San Luis Obispo, CA 93408

Send comments on this paper to its author, Jane Baxter at jane.baxter@verizon.net, and to SB *CAN* at ken@sbcn.org.

VIDEO AND POWER POINT PRESENTATIONS:

1. A Power Point Presentation by Mesa Refinery Watch, on the flaws with the Phillips 66 Rail Spur Project. *A well-done community perspective.* **(URL NOT YET UP)**
2. “A Danger on Rails,” published on line by the New York Times. *This is a short documentary that warns about the dangers posed by trains that transport explosive oil across North America. Op-Docs, by Jon Bowermaster, April 21, 2015.* (<http://beniciaindependent.com/topics/emergency-readiness-response>)
3. “Boom: North America's Explosive Oil-By Rail Problem.” *A comprehensive written report and documentary video.* (<http://stories.weather.com/boom>)

ARTICLES, STUDIES, AND REPORTS

1. “Recent Train Accidents Call for a Rational, Risk-Based, Mitigation Approach,” by Hinman Consulting Engineers, Inc. *An overview of Bay Area Impacts from the Phillips 66 Rail Spur project.* (http://hce.com/Library/documents/New_Oil_Transportation_Risks.pdf)
2. “Runaway Risks; Oil Trains and the Government's Failure to Protect People, Wildlife and the Environment.” *A good overview article by the Center for Biological Diversity.* (http://www.biologicaldiversity.org/campaigns/oil_trains/pdfs/runaway_risks_web.pdf)
3. “It Could Happen Here: The Exploding Threat of Crude by Rail in California.” *A good evaluation of California-specific oil by rail issues by the National Resources Defense Center.* (<http://www.nrdc.org/energy/ca-crude-oil-by-rail.asp>)
4. Fact Sheet "Health Concerns Associated with Oil Fires," by Minnesota Department of Health. <http://www.health.state.mn.us/divs/eh/emergency/chemical/oilfires.pdf>