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TOXIC TAR SANDS: PROFILES FROM THE FRONT LINES



TOXIC

An aerial photograph of a tar sands extraction site. The ground is a mix of grey sand and dark, sticky bitumen. A yellow tracked machine, likely a crawler loader or similar heavy equipment, is positioned on the right side of the frame. The machine has a yellow body and a black track system. The overall scene depicts the industrial scale of tar sands mining.

TAR SANDS

MOST AMERICANS have never heard of the Alberta tar sands, yet it is one of the largest and most destructive projects on Earth. This little-known industrial mega-project is creating an ongoing environmental disaster in Canada, and is now threatening to create one here in the United States.

Tar sands oil is mined from a black sticky substance called bitumen, found beneath the vast boreal forest in Alberta, Canada. To extract tar sands crude, oil companies clear-cut ancient forest, then strip mine the soil beneath it, using huge quantities of fresh water

and natural gas to separate the oil from bitumen. The process leaves behind giant toxic lakes that are linked to abnormally high rates of cancer in neighboring communities and are large enough to be seen from space.

But it doesn't stop there. The oil industry is expanding facilities to process this toxic oil here in the United States through a network of refineries and pipelines. Public health in several states is under threat from dramatic increases in refining pollution, and massive pipelines are planned to cross the United States' largest freshwater aquifer, which supplies one-third of our nation's agriculture.



TAR SANDS OIL POISONS OUR AIR

Processing tar sands oil releases pollutants directly linked to asthma, emphysema and birth defects into American communities. Because tar sands oil is a heavy, low-quality form of crude, it requires extensive “upgrading” to be transformed into fuel. Refining tar sands crude creates far more air pollution in American communities that are already burdened with cancer and poor air quality as a result of oil industry activities. Tar sands oil contains, among other toxic metals, 11 times more sulfur and nickel, six times more nitrogen, and five times more lead than conventional crude oil.¹

Heavy metals and polycyclic aromatic hydrocarbons released in tar sands refining have been linked to pre-natal brain damage. Nitrogen oxides, along with volatile organic compounds released in tar sands refining are the principal causes of smog and ground-level ozone. Exposure to nitrogen oxides is a direct cause of asthma, emphysema and other lung diseases.

With plans to triple refining and transportation of tar sands by 2015, there is no question that air pollution and health problems in communities from the Great Lakes to the Gulf Coast will increase.

TAR SANDS OIL CONTAMINATES OUR CLEAN WATER

Tar sands production wastes and contaminates tremendous amounts of water. Every barrel of oil produced requires four barrels of water. In this process, water is pumped into toxic waste reservoirs large enough to be seen from space. The mercury, lead and arsenic in tar sands waste threaten human health, even at small levels of exposure. Already, communities downstream from tar sands mines in Canada report 30 percent more incidents of rare bile duct cancer than those who do not live near the tar sands.²

Expanded reliance on this dirty oil would put important American water sources at risk. Canadian pipeline companies currently operate 1,900 miles of oil pipelines in and around the Great Lakes watershed, which supplies 25 million people with drinking water.

Tar sands oil contains elevated levels of many known carcinogens and toxins. In a recent study, tar sands wastewater “tailings” from extracting oil were found to contain ammonia, benzene, cyanide, phenols, toluene, polycyclic aromatic hydrocarbons, arsenic, copper, sulphate, and chloride.³ Many of these chemicals are highly toxic and known to cause cancer, and regularly leach into groundwater from the massive lakes used to store tailings.⁴ These chemicals are present in tar sands oil before and after processing, and will end up in American groundwater when pipelines leak.

Communities in Alberta have long been speaking out about the damage tar sands poses to their health through water and air pollution. Now, Americans from Minnesota to Houston are worried about Canada’s tar sands expansion poisoning their water, destroying their farmland, and contaminating their air.

Here, we profile thirteen people from across North America whose health and livelihoods are at risk as a result of toxic tar sands expansion.

THE HEART OF THE TAR SANDS: A BLIGHT ON NATIVE COMMUNITIES

TAR SANDS ARE DESTRUCTIVE AT EVERY STAGE OF THEIR LIFECYCLE, from the ravaged boreal forests of Northern Canada to the choked communities in refining corridors across America. But the indigenous communities living closest to the land bear special witness to its destruction. Tribes have spoken out on the toll tar sands have taken on their ancestral lands and the water and wildlife that supports their culture and community. These are the stories of prominent tribal activists and their struggle against the devastating tar sands.

“My people are dying.”

“**MY PEOPLE ARE DYING**,” says George Poitras, a member of the Mikisew Cree First Nation in Fort Chipewyan, Alberta. His community, situated just downstream from the vast toxic moonscape of tar sands development in Alberta, has absorbed some of the worst damage from the project.

“The extraction of oil from Canada’s tar sands is having a devastating impact on our indigenous people,” Poitras says.

Studies have found levels of mercury, arsenic, lead, and other toxins at elevated levels near the area’s tar sands excavation sites.⁵ These chemicals are known carcinogens and cause the types of rare cancers—including cancer of the bile ducts—that are on the rise among members of the Fort Chipewyan community.

Statistically, bile duct cancer normally occurs in one out of every 100,000 people. But a study by the Alberta Cancer Board confirmed these cancer rates at Fort Chipewyan are 30 percent higher than average.⁶

Poitras has been on a mission to raise awareness about the harmful effects of tar sands development on his community’s health—ever since 2006, when Fort Chipewyan’s general physician, Dr. John O’Connor, went public in the press about the unusual cancers among the patients he served.

For the past four years, Poitras has been spreading the word about the risks of tar sands oil at colleges and universities, public forums, and even at oil companies’ annual meetings. He and other indigenous activists have collaborated on documentary films about the tar sands that have been shown in film festivals around the world.

“The damage from the tar sands isn’t restricted to Fort Chipewyan or even to Alberta,” he says. There are pipelines that leak oil, and tar sands refining is a huge contributor to global greenhouse emissions. We call the tar sands ‘bloody oil.’”

George Poitras

Mikisew Cree First Nation,
Fort Chipewyan, Alberta



PHOTO: GEORGE POITRAS



PHOTO: PEMBINA INSTITUTE

PHOTO: ELIZABETH SHERMAN

ELIZABETH SHERMAN has been fighting contamination from tar sands oil pipelines for years. Known in her community by her Ojibwe name, “Blue Sky Woman,” Sherman is a member of the Leech Lake Band of Ojibwe in Minnesota.

The Leech Lake Ojibwe have always lived on the piney marshes of their ancestral lands. It is no surprise they value water deeply on their reservation in the land of “ten thousand lakes.”

“Between our lakes and our wetlands, the Leech Lake Reservation is 70 percent water. Our greatest concern is our water,” says Sherman.

Enbridge Inc., the largest tar sands pipeline operator in Canada (and the company behind the massive Kalamazoo pipeline spill in Michigan in 2010), pumps its toxic products south directly through Leech Lake lands.

Over the last several years, oil spills from pipelines owned or operated by Enbridge have leaked multiple times, spilling toxic crude from Alberta’s tar sands and threatening the community’s water.

Some of Enbridge’s pipes have been in the ground for 60 years, and tribal members tell of corroded pipes protruding from the ground, cracked and seeping oil. In 2010, three spills occurred in four months within a 35-mile radius of the tribal boundaries, all from pipelines owned by Enbridge. One of the spills was not detected until the oil-coated marsh accidentally caught on fire; tribal members had to alert the company. It remains unclear how much oil leaked into the surrounding water.

Sherman says these are just the most recent events in an ongoing environmental tragedy for her community.

Traditional areas for gathering sage on the reservation have been destroyed by pipelines. For centuries, the Ojibwe have relied on these sacred medicinal plants, but pipelines buried directly in

critical wetlands have all but eliminated them from the local ecosystem. Testing by the tribal resource management division revealed contaminants in wells on the reservation, and confirmed a large crude oil plume stretching towards homes in the community.

The two major aquifers in Leech Lake are part of a watershed that feeds the headwaters of the Mississippi River.

“This isn’t just a Leech Lake issue,” Sherman explains. “We are holders of

the headwaters of the Mississippi. If our Mississippi River headwaters are polluted by tar sands, everything in the river’s path down to the Gulf of Mexico will be contaminated.”

Sherman is now leading a legal battle against the Enbridge pipeline running through the Leech Lake Reservation. She and three other plaintiffs have asked for a temporary restraining order to stop construction of a new tar sands pipeline through their land. Despite the plans for new construction, there is still no remediation plan for the existing spills that have polluted the tribe’s water. Their lawsuit remains in appeals status.

Meanwhile, Sherman says, “The oil is still there, the water is still contaminated, and the damage is still done.”



Elizabeth Sherman

Leech Lake Band of Ojibwe,
Minnesota

“Our greatest concern is our water.”

POISON PIPELINES IN AMERICA'S HEARTLAND

IN THE WAKE OF THE BP OIL DISASTER IN THE GULF, many people are thinking more about where we get our oil, and at what cost. A vast network of oil pipelines crisscrosses our country, posing a largely overlooked threat, especially in the rural areas of America's breadbasket. Many pipelines are already poisoning water and land throughout the country, with over 2,500 spills from pipelines occurring in the last decade alone.⁷

The proposed Keystone XL pipeline would make the situation much worse. The pipeline would carry toxic tar sands oil across nearly 2,000 miles of American farmland from Montana to the Gulf Coast. These are the stories of American farmers, ranchers, and landowners that live with the toxic threat of pipeline spills and tar sands contamination, present and future.

KENT MOECKLY farms wheat and corn in the prairie grasslands of South Dakota.

Moeckly and his neighbors rely on a rural water system that draws from the James Aquifer, sourced just north of his farm. This aquifer lies in sandy, permeable soil. But now a massive tar sands pipeline runs right through Moeckly's farm and the aquifer, putting his community's only source of water at risk.

This oil artery, known as the Keystone I, is TransCanada's main tar sands oil pipeline into the United States. It provides a taste of what would come if TransCanada is allowed to more than double its toxic capacity with the Keystone XL pipeline.⁸

Moeckly says pipeline consultants didn't even survey his land before they reported it as "low consequence" status, which allowed

TransCanada to build the Keystone I through the aquifer in 2009, using thinner pipe and higher pressure than

any other pipeline before it.

When farmers in the area requested thicker pipe to reduce the risk of water contamination, their concerns went unheeded.

"TransCanada absolutely ignored us. They plowed on through," Moeckly says.

Moeckly never wanted the pipeline to come through his land. Despite aggressive pressure from the company, he resisted signing TransCanada's initial offers. But in South Dakota, "eminent domain" laws do little to protect landowners from large corporations. A foreign company like TransCanada can seize private property if negotiations fall through.

Faced with the prospect of losing his land, Moeckly felt he had no choice. He finally agreed to allow the pipeline in, and accept the threats from tar sands oil.

Moeckly says companies like TransCanada turn neighbor against neighbor in their effort to get their projects built. "They will tell you that you are the 'last one on the block' and 'holding things up,'" he says.

Kent Moeckly

Britton, South Dakota

“My family
will be living
with this for
generations.”



PHOTO: KENT MOECKLY



“This pipeline goes against the whole foundation of organic farming.”

Moeckly fears the long-term impacts of the pipeline on his land and crops, but knows it is too early to tell what the full extent of the damage may be. The only evidence he has of the buried pipe is the mess construction crews left behind. Debris and soil mounds still litter his land, leaving large standing pools throughout his fields. He estimates about fifteen acres of his property are now useless.

“It’s dead land now,” he says. “It’s a lake.”

But it’s the future threat of pipeline spills and water contamination that worries him most. “My family will be living with this for generations,” he says. “The threat will never disappear.”

BEN GOTSCHALL feels a deep, physical sense of connection to his family’s ranch near Atkinson, Nebraska. He became involved in the fight to save the place he loves in April, when he heard of public hearings for a tar sands pipeline coming through Atkinson. When he went to the hearing, he saw the pipeline would cross Holt Creek just a few miles from where it flows through the middle of the Gotschall ranch, and lie directly in the sensitive sand hills and the precious Ogallala Aquifer. Now his greatest fear is that his family’s creek and the Ogallala aquifer that supplies Nebraska with nearly all of its water will be threatened from toxic pipeline leaks like the Kalamazoo River oil spill in July.

His is the fourth generation to work and live on his family’s land. Today, the Gotschalls raise organic, grass-fed beef and dairy cows on their ranch nestled along the banks of Holt Creek in the scenic

Sand Hills of Nebraska.

The 30-year-old rancher has become an outspoken opponent of the Keystone XL pipeline. Gotschall is motivated by his strong sense of place. He loves Nebraska and the rolling hills where he grew up.

Because his family does not own land directly on the Keystone XL route, they have no legal recourse to protect their fragile aquifer and creek from the pipeline’s permanent threat.

Gotschall knows organic farmers must pay particular attention to soil and water quality, and Nebraska’s crystal aquifers and unspoiled grassland are vital to his way of life.

“This pipeline goes against the whole foundation of organic farming,” he explains. “All we have out there is grass and water. That’s how we make our living.”

What most upsets Gotschall is that farming livelihoods in Nebraska are being threatened just so a foreign oil company can make more money. Instead of building more pipelines, Gotschall would like to see Nebraska’s wind energy harnessed. Nebraska has the sixth highest wind energy potential in the country, and presents a significant opportunity for good Nebraska jobs.⁹

“We need to do things that put money in Nebraskan pockets, not foreign corporate pockets,” he says.

Ben Gotschall

Atkinson, Nebraska

“A leak would take seconds to poison the land I’ve lived off for thirty-two years.”

Harry Bennett

Marion County, Kansas

HARRY BENNETT will tell you he is no hydrologist, but he knows what’s at stake when it comes to water quality in his Kansas town. A 32-year resident of Marion County in Kansas, Bennett is a grain marketer for the Organic Grain Producers Association, representing hundreds of farmers in several states. He is also the owner of a small family farm crisscrossed by the Spring Branch Creek and riparian wetlands bordered by TransCanada’s Keystone Cushing extension, which will soon funnel dirty tar sands crude to Oklahoma.

Bennett farms his land organically, raises black walnut trees, and diligently maintains the riparian wetlands along his section of creek. He believes the preservation of this wetland habitat protects his farm from powerful creek floods, and helps purify the groundwater his family and farm survive on. They draw all water for household use, livestock, and crop irrigation from two wells on their property. The wells are their only source of fresh water.

But now Bennett is worried about his family’s water. TransCanada’s pipeline directly threatens his wells and wetlands with contamination from tar sands crude.

This summer, Bennett regularly walked to the 20-foot hole where huge bulldozers bored a deep passage for the pipeline under the railroad that forms his western property boundary. Over a period of many weeks, he observed a crew pumping out what he thought was rainwater from the construction pits, but his visits to the site revealed the holes would refill every evening with the same clear blue water that fills his wells.

Bennett now believes the pipeline lies directly in the groundwater he relies on for his farm.

But because the pipeline does not physically cross his land, Mr.

Bennett had no say in its construction. When Spring Branch Creek flooded in June, it washed out a construction bridge, gouged deep erosion in the banks, and sent pipeline construction debris washing up into the woods on his property.

“They do it the cheapest way they can with very little thought to ramifications downstream,” Bennett says.

The Enbridge Michigan spill in July gushed one million gallons of toxic crude into the Kalamazoo River before any leak was detected, and Bennett knows he now faces similar threats from the Keystone pipeline. The pipeline is in direct contact with the water table his family and his community rely on. Any leak or rupture of the pipeline would immediately contaminate their only clean water source.

“This pipeline is a ticking time bomb,” Bennett says. “A leak would take seconds to poison the land I’ve lived off for thirty-two years.”

TWO YEARS AGO, David Daniel was surprised to hear from his neighbor of survey crews trespassing on his property near the east Texas town of Winnsboro.

TransCanada was beginning work for the Keystone XL tar sands pipeline, slated to run the length of Daniel’s land, cutting it in half.

Daniel wasn’t told about the pipeline before the survey crews showed up, but laws in Texas do little to protect landowners from corporations like TransCanada.

Now, Daniel is worried about the pipeline destroying wetland habitat and threatening springs and creeks. He’s spoken with water experts who say the construction of the pipeline could forever damage the natural water supply in the area.

Daniel bought his land specifically for its lush resources with the intention of preserving it; 20 acres of 100-year-old trees, wetlands, wildlife and spring-fed creeks were to be his family’s sanctuary.





KEYSTONE XL PIPELINE

The Keystone XL is the latest planned expansion in TransCanada's web of toxic oil pipelines, designed to increase our dependence on the world's dirtiest oil for decades to come.

- 1,980 Miles of pipeline spanning the width of the US.¹⁰
- Will cross six states, from Montana to Texas
- A barrel of tar sands oil produces up to 3 times as much global warming pollution as conventional oil.¹¹
- Tar sands oil from the Keystone XL pipeline will create pollution equivalent to adding roughly 6.5 million passenger vehicles to the road, or constructing 12 new coal-fired power plants.¹²
- If we increase automobile fuel efficiency by just 2.5 mpg from current standards, we will save more oil than the Keystone XL pipeline can provide.¹³

Kalamazoo River oil spill Photo: Lucas Evans for Sierra Club Michigan

“Our intention was to preserve our land as a legacy for our daughter,” he says. “We never dreamed that we would live to see any part of it destroyed, especially by a foreign oil company.”

Soon after the surveyors came through, Daniel received several intimidating letters from TransCanada. Then, land agents were sent to his home, pressuring him to sign contracts he was not given time to read. Fearing he would lose his land completely, Daniel eventually signed an easement agreement.

But he hasn't given up. Now, Daniel is stepping up his fight to protect property owners from being forced to endure the unacceptably high risks tar sands pipelines pose to their land. Two thousand five hundred and fifty-four pipeline spills occurred between the years 2000-2009 alone, and Daniel knows a pipeline leak is not a question of “if,” but “when.”¹⁴ He is organizing with farmers and landowners from Nebraska to Texas to inform others about the risks toxic pipelines pose, and the threat his family is now forced to live with.

“My family will be forced to live in fear and physical danger of this pipeline with some of the most toxic stuff we've ever seen come through this state. This is our home and was supposed to be a safe place to raise our daughter, and now it's at risk for an oil disaster.”

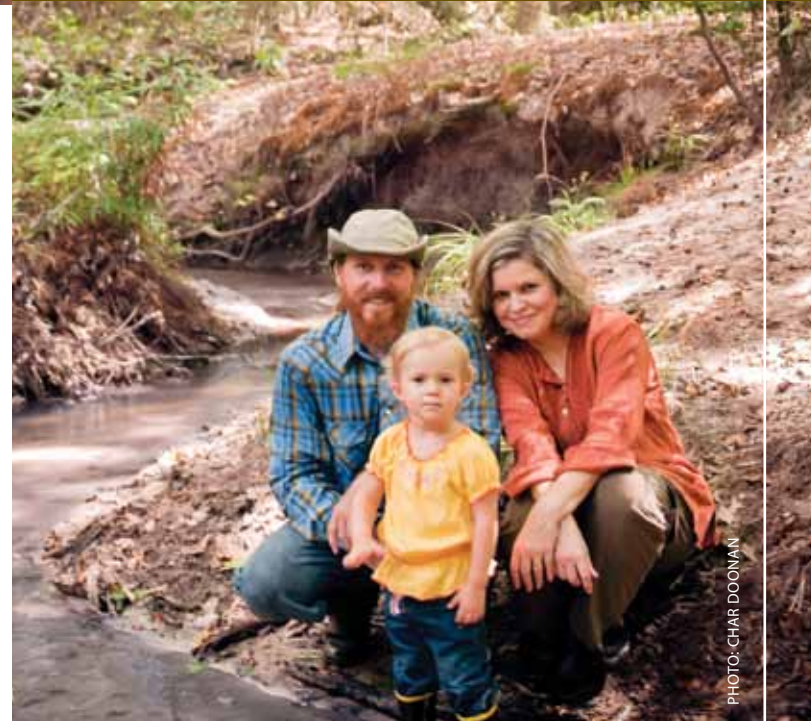


PHOTO: CHAR DOOVAN

David Daniel
Winnsboro, Texas

“ This is our home and was supposed to be a safe place to raise our daughter, and now it's at risk for an oil disaster. ”

TAR SANDS REFINERIES: POLLUTING AMERICA'S AIR

MANY COMMUNITIES SLATED FOR TAR SANDS REFINING already suffer the disproportionate brunt of industrial pollution and health problems associated with chemical and petroleum refining. Since refineries and heavy industry are often located in low-income communities, these citizens have the fewest resources available to defend their communities against polluters. They pay the high health costs that come as a direct result from exposure to industrial contaminants.

In communities around the Great Lakes, tar sands oil is sent to refineries fed by Enbridge's massive Lakehead Pipeline network, which is 1,900 miles long and among

DR. DOLORES LEONARD, a retired professor, lives a few blocks from Marathon Oil Company's refinery in southeast Detroit in the same house she's called home for fifty-three years. Leonard has been fighting for environmental justice in her community since 2003. She's earned a reputation as a formidable opponent to polluters.

There are dozens of polluting industries in Leonard's zip code, and she works hard to rein in toxic emissions and protect public health in her neighborhood. But no issue has taken up more of her time and energy than Marathon's new refining expansion—a \$2.2 billion “upgrade” to its facilities to increase the volume of tar sands coming into Leonard's community.

Despite opposition from neighbors, the Marathon refinery's

pollution is ballooning as more tar sands are processed in the expanded facility.

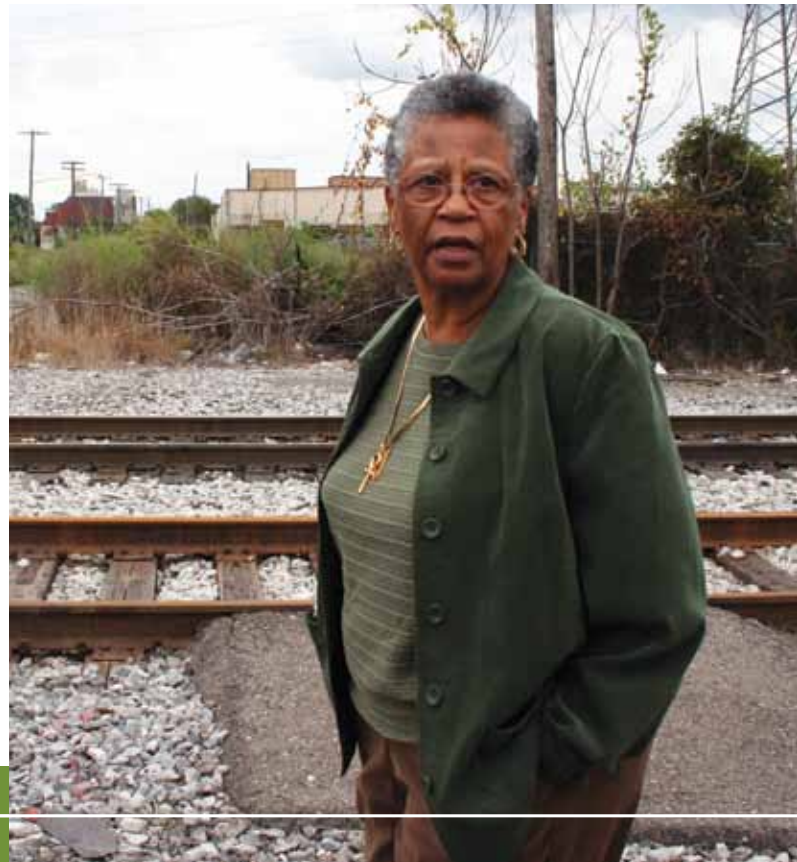
Leonard is not surprised that her neighborhood has been targeted for processing the dirtiest form of oil in the world. Experience has taught her that the worst pollution usually finds its way to the poorest communities. “When you look at where detrimental polluting facilities are located,” Leonard says, “it's always in communities where there are poor people and people of color.”

Leonard was determined to arm her neighbors in their fight to protect air and health from the growing tar sands threat. Twice she helped bring in a toxicologist from the Michigan Department of Community Health to talk with residents of her community about illnesses related to living in the vicinity of oil refining, and

“This tar sands refinery brings illness for miles around...life as we have known it will never be the same.”

Dr. Dolores Leonard
Detroit, Michigan

PHOTO: OLIVER BERNSTEIN



the largest in the world.¹⁵ Over the summer of 2010, an Enbridge pipeline burst, spilling over one million gallons of crude into a major river that flows into Lake Michigan. But a greater, ongoing environmental disaster takes place every day in the refining communities fed by Enbridge's pipelines, where air pollution damages residents' health.

If Canada's tar sands industry is allowed to move forward with plans for massive expansion of pipelines and refineries, the situations in these communities will worsen.

Americans living near some of the largest Midwest refineries, such as the BP Whiting refinery outside Chicago and the Marathon refinery in southwest Detroit, are already suffering from health conditions like asthma, and face greater air pollution as these refineries expand to process more tar sands crude. In South Dakota, residents are fighting the Hyperion refinery, which would process tar sands oil in the heart of the state's richest farmland. Others, living in Houston, fear escalated air pollution if the Keystone XL pipeline is built.

to explain how residents can file a Toxic Release Inventory with the EPA.

More times than she can remember, Leonard has appeared before the Detroit City Council to protest the devastating impacts of tar sands—not only on southwest Detroit, but wherever pipelines carry tar sands crude oil.

Leonard has set up public hearings with the Michigan Department of Community Health to help inform her neighbors about the threats of processing tar sands oil.

“There are so many health and quality-of-life problems resulting from all the heavy industry—and now tar sands—in the neighborhood, and you live with it every day,” Leonard says. “This tar sands refinery brings illness for miles around, along with stress for residents who are watching it being built. They know that along with the structure comes the knowledge that life as we have known it will never be the same. It gives one the feeling of being trapped and helpless.”



Deformed fish caught in polluted river near tar sands mine. Photo: George Poitras

COMMUNITY AT RISK:

REFINERIES AND MICHIGAN'S MOST POLLUTED NEIGHBORHOOD

DETROIT'S 48217 ZIP CODE has the dubious distinction of being the most polluted in Michigan—and neighboring zip codes in southwest Detroit account for five of the ten most polluted areas statewide.¹⁶

More than 85 percent of 48217 residents are African American, and the median household income is about half the national average. Sadly, but perhaps not surprisingly, polluting industries choose to victimize the communities with the fewest resources to resist. At latest count, southwest

Detroit has 27 high-polluting facilities.

Now, Marathon Oil is expanding its massive Detroit refinery to process more tar sands crude oil from Alberta. The heavy tar sands crude, which contains many impurities, takes far more energy to refine than conventional crude oil, and releases more toxins, heavy metals, and carbon dioxide in the process. The toll tar sands refining will take on this community is compounded by the blight of an industry already poisoning its people.



Theresa Landrum
Detroit, Michigan

PHOTO: RHONDA ANDERSON

THERESA LANDRUM still lives on the same block where she was born in southwest Detroit, surrounded by an industrial hub of polluting industries, with smokestacks and chemical tanks just a chain-link fence away from backyards and parks. Many of the Midwest's largest petrochemical refiners, including the massive Marathon refinery, are Landrum's not-so-friendly neighbors. Landrum believes the refineries are responsible for the cancer and illness in her family and neighborhood, and the problem will become worse as the Marathon refinery expands to process more tar sands crude, which contains more pollutants.

A trained journalist, Landrum stopped working full-time in the early 1990s to help her mother when she was diagnosed with cancer.

"My mom had four different cancers," Landrum says. "First she had cancer of the throat, then the face. In 1986 she was diagnosed with lung cancer but survived. Then she developed cancer of the other lung and died in 1996."

Landrum's father—a one-time Marathon Oil employee—also died of cancer. Landrum is convinced that the toxic environment of her neighborhood contributed to their illnesses and subsequent deaths.

"Ten people on my block have died of cancer in the last decade," Landrum explains. "We have a lot of pneumonia, too—one of my brothers died of it—and lots of asthma. All the little kids in the house across the street have asthma, and their father just died of cancer."

Landrum was horrified when Marathon announced plans to build a \$2.2 billion expansion to process tar sands crude—the world's dirtiest oil.

"When we found out Marathon was bringing in nasty tar sands from Canada, my first reaction was 'Lord have mercy. Where can we go?'"

She started researching what kinds of chemicals would be emitted by the new tar sands facility and the effects they can have on human health. "We found terrible things. Carcinogens, carbon monoxide, benzene and toluene, which harm the nervous system, methyl ethyl ketone, which can cause blindness. A lot of really bad stuff."

Landrum began attending community meetings and block meetings, and talking to anybody who would listen about the increased pollution coming from tar sands refining.

In 2007, Landrum herself was diagnosed with cancer. While undergoing chemotherapy and radiation, she continued to attend Detroit City Council meetings to protest the tar sands expansion of the Marathon refinery. That fight was lost.

Landrum's cancer is now in remission, although a recent chest x-ray showed severe damage to her lungs, and she is undergoing tests to determine the cause of an enlarged thyroid and a goiter in her neck. Undaunted, she continues to fight to stop tar sands oil from further poisoning her home.

Landrum says the toxic tar sands expansion has left many of her neighbors ready to give up. Pushed beyond their limits by ever increasing tar sands pollution, some are considering suing the city and Marathon for money to relocate away from their ravaged environment.

"Sometimes," Landrum says, "it seems like these companies put dollars above human life."

JACKIE SMITH has lived in Detroit since 1967, watching her neighborhood slowly deteriorate under the shadow of the Marathon Oil Refinery, which is now preparing to process additional tar sands crude.

The sharp winds of the Midwest blow Marathon's toxic fumes right over Smith's home—fumes she believes have caused her family's health problems.

"My middle son had nose bleeds when he was a child. The doctor said it was from benzene," she says. Benzene is a potent human carcinogen.

"My husband has asthma and emphysema, hypertension, and sleep apnea. My sinuses were purple like I'd smoked all my life and I've never smoked. You should hear my voice in the morning. I'm

“When we found out Marathon was bringing in nasty tar sands from Canada, my first reaction was ‘Lord have mercy. Where can we go?’”

PHOTO: CAROLYN MARSH

gagging. This has been going on for over 10 years.”

Smith’s husband, Robert, is frustrated with public hearings where officials seem to turn a deaf ear to community complaints of pollution and poor air quality. But she is more optimistic. Expert air quality monitors were recently called in to assess the neighborhood’s air after Smith and her neighbors called attention to poor monitoring practices in her area. The independent tests showed major discrepancies with the state’s results, indicating toxins in her community were even higher than reported.

“[Marathon’s] refinery is too near to local schools,” Smith says. “When you go into someone’s house and smell the chemicals, why would you want to stay here?”

Children in Smith’s neighborhood will be exposed to increased levels of airborne toxins from Marathon’s tar sands expansion, further exacerbating respiratory and other illnesses already prevalent among children in her neighborhood.

“Tar sands oil is more toxic than regular oil, so what kinds of effects will that have on children already suffering from asthma?” Smith wonders. “They’re killing a community.”

CAROLYN MARSH’s house in Whiting, Indiana, just southeast of Chicago, sits within walking distance of both Lake Michigan and the BP Whiting Refinery. One is beautiful and the other, Marsh says, looks like “a death trap zone.” Now BP is pushing to expand the capacity of its refinery to process tar sands crude.

The synthetic heavy crude produced from tar sands is laden with more toxins than conventional oil. If the expansion goes through, people like Marsh, who live in the shadow of these refineries, will face increased exposure to heavy metals, sulfur, and carcinogens like benzene.

After learning of BP’s plans to pump tar sands pollution into the air and her community, Marsh was galvanized to action. She joined a legal challenge to the oil giant’s air permit.

Marsh believes BP’s permit application dramatically underestimates the potential air pollution from their tar sands expansion. The company understated the amount of toxic gases vented from flares,

Carolyn Marsh

Whiting, Indiana



“Quality of life here in Indiana should not suffer for foreign oil profits.”



Jackie Smith
Detroit, Michigan

PHOTO: RHONDA ANDERSON

“They’re killing a community.”

claiming they would only be released occasionally. But flaring will only increase as the refinery handles more of the world’s dirtiest oil.¹⁷

Flaring is only one part of the refinery’s massive polluting process, and air pollution is not the only threat that Marsh fears from the tar sands expansion.

Lake Michigan, which provides drinking water for 10 million people, will be exposed to new levels of contamination from particulate emissions and huge increases in ammonia and other discharges into the water from the refinery’s tar sands expansion.^{18,19} The refinery is already one of the largest sources of mercury pollution in Lake Michigan.²⁰ Mercury is a potent neurotoxin that causes severe fetal damage, impaired motor function, and kidney and respiratory damage in humans.²¹

Tar sands crude spells disaster for clean water in every step of its life cycle. If tar sands operations continue to expand in America, Lake Michigan will be exposed to the same types of contamination spreading through the once pristine water sources along the Athabasca River in Alberta, where tar sands are mined.

A recent study published by leading Canadian scientists found elevated concentrations of toxic heavy metals including arsenic, lead and mercury around and downstream from tar sands mining operations, suggesting a strong correlation between tar sands mining and toxic discharges to water resources.²² These poisonous impurities are released in refining as well, and discharges from BP’s tar sands expansion will bring the pollution of the Athabasca directly to Lake Michigan.

Marsh believes the citizen struggle to stop the tar sands expansion is her community’s best line of defense, and she has committed to the fight. She has little faith in state regulators, whom she believes are too complicit with toxic conditions created by BP’s refinery. Marsh knows what’s at stake.

“We don’t want Lake Michigan to become another oil industry sacrifice zone. Quality of life here in Indiana should not suffer for foreign oil profits,” she says.

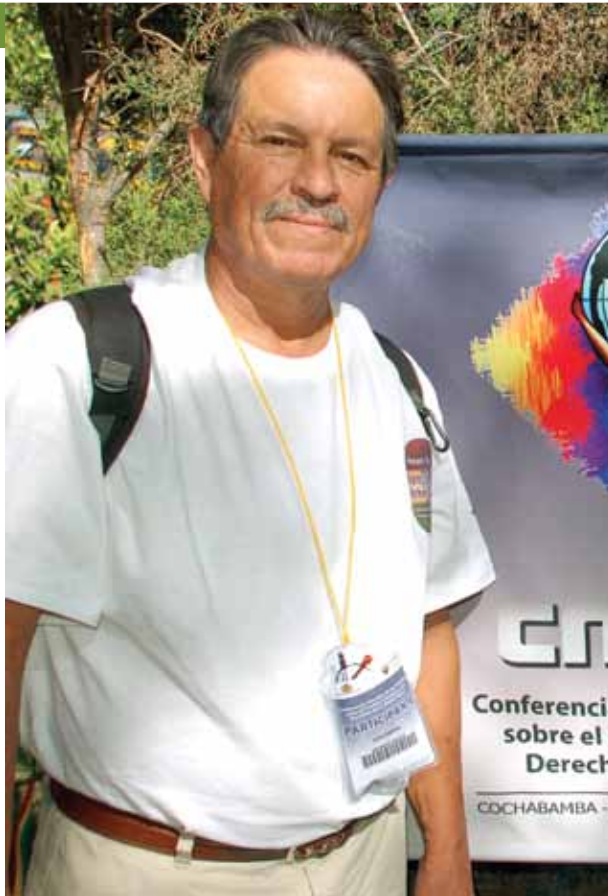


PHOTO: JUAN PARRAS

Juan Parras

Houston/Port Arthur, Texas

WHEN JUAN PARRAS moved to Eastwood, a neighborhood along the Houston Ship Channel, one of the first things he noticed was the proximity of local schools to the vast array of refineries and power plants that line the ship channel. Many of the refineries process tar sands oil from Canada. Quickly realizing the scope of this toxic threat, Parras began a personal crusade to fight for better air.

Parras's community, a primarily Latino, low-income area along the Houston Ship Channel's industrial corridor, is home to several of the nation's most polluted schools.²³

This is the targeted destination of the Keystone XL pipeline, where more than 90 percent of the heavy, sulfurous tar sands crude will be refined. An additional 900,000 barrels of tar sands every day will further poison this community if the Keystone XL pipeline is built.

The massive network of refineries along the ship channel is one of the only places in North America with the industrial capacity to create fuel from the tarry sludge of bitumen flowing from Canada. Consequently, it is already one of the worst public health zones in the nation.

A study done by the University of Texas and the city of Houston in cooperation with the EPA targeted twelve hazardous air pollutants generated by petrochemical refining; all twelve chemicals registered present in Parras's community. Eight are known carcinogens, and

“Your body gets used to the smells, but not the effects.”

registered at elevated levels.²⁴

Parras sees the tragic manifestations of these chemicals in the children of his community.

“A lot of kids are getting leukemia. You have a 56 percent greater chance within a two mile radius of the Houston Ship Channel of contracting leukemia” says Parras, referring to the EPA study.

With Houston refineries planning to process an additional 900,000 barrels of the world's dirtiest oil every day from the Keystone XL pipeline, rates of pollution and disease in the area can only be expected to increase.

At public EPA hearings, Parras and citizens from the ship channel area testified that refining tar sands would unfairly burden residents who already suffer from the oil industry's pollution.

Despite the toxic environment created by the oil industry, Parras's community is firmly rooted, and many feel it is a home worth fighting for. “Once you develop a sense of community its hard to leave. Even in the face of pollution it is difficult to break up culture.”

Yet the massive petroleum refining corridor in their backyard takes its toll on many, and rates of diseases associated with exposure to petrochemical manufacturing are high. Tar sands are the last thing ship channel residents need.

“Your body gets used to the smells,” Parras says, “but not the effects.”

CAROLYN HARKNESS lives on an historic homestead in Union County, South Dakota, once rated among the top five rural counties in America for quality of life.

That changed when rumors of a “gorilla” coming to the community began three years ago. That “gorilla” turned out to be Hyperion, a tar sands processing plant that, if built, will be the sixth largest refinery in the nation.

Hyperion’s tar sands refining threatens to destroy a bucolic farming community with massive industrial development, unprecedented levels of air pollution, and contamination of pure local water supplies. Hyperion’s pollution permit application calls for nearly 7,600 tons of airborne toxins to be pumped into Union County, including ammonia, sulfur dioxide and volatile organic compounds. This does not include the 19 million tons of carbon dioxide the plant plans to emit—more per barrel than any other refinery in the country.²⁵

The refinery would draw ten million gallons of fresh water a day from the Missouri River, but Hyperion has not told the community how it plans to treat the water it will contaminate or where it will be disposed. Harkness worries the results could be devastating to the fragile aquifer that supports her farm.

What’s more, Harkness and others suspect the slew of pollution from Hyperion will be just the beginning, as more heavy industry would move in to support the functions of the massive tar sands refinery.

When Hyperion realtors were buying land rights, they told people there would be a one- to two-mile buffer zone around the project. Harkness says the realtors did not give details on the plant

itself, yet they pressured landowners to sign away their land. After acquiring the land they needed, the developers changed their plans for the site.

Now, there is no buffer. The refinery would be about 300 feet from Harkness’s front door.

When Harkness found out where the plant would be located, she was devastated. “I remember standing there, feeling like someone had slugged me in the stomach. I love this land so much. The quiet, the brilliant stars at night, they could be gone forever.”

“For most farmers,” Harkness explains, “land is their home, their business, their retirement and their heart. If Hyperion is built, the richest and best farms in South Dakota will be destroyed.”

The wooded pastures of the Harkness homestead sit on a huge aquifer, with the Brule Creek twisting through it. Discharges from the massive operation would enter her water less than a quarter mile upstream, contaminating the pristine water supply that has supplied her farm since the pioneer days.

If Harkness and her neighbors lose their fight against Hyperion, she fears she will have to abandon her home to preserve her family’s health and continue her cherished, rural way of life.

“Where could we go? We are too young to retire and too old to start over,” she says.

Moreover, Harkness worries for her land because she believes she has a responsibility to take care of the water and farmland that have sustained her family.

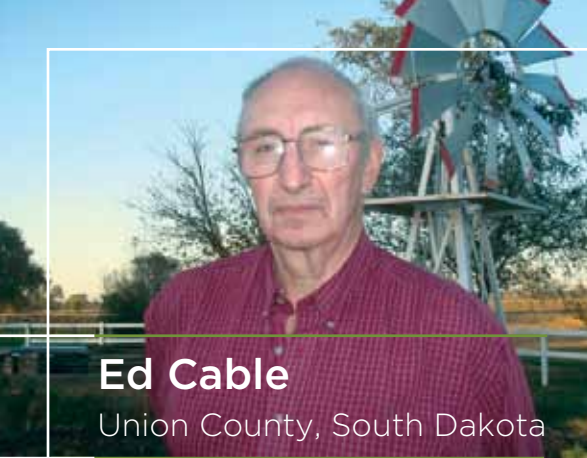
“This land belongs to God and it is our responsibility to save it for future generations. It has treated us well,” she says. “We need to return the favor.”

“ If Hyperion is built, the richest and best farms in South Dakota will be destroyed. ”

PHOTO: CAROLYN HARKNESS



Carolyn Harkness
Union County, South Dakota



Ed Cable

Union County, South Dakota

PHOTO: ED CABLE

“ [The tar sands refinery] will destroy hundreds of years of quality air and water. ”

ED CABLE lives three miles from the footprint slated for Hyperion’s tar sands oil refinery. When he and his neighbors first heard about the development, all they were told was that it was for an “undisclosed purpose.” That got him worried.

“If they won’t tell you what it is, it’s probably something you won’t like,” Cable says.

Once Cable learned that the development would be a refinery designed to process the dirtiest oil in the world, he sprang into action, holding community meetings and organizing a community group, “Save Union County,” to fight the project.

He’s lived in the area since 1969, and the last thing he wants to see is the rolling hills of his farming community transformed into an industrial sacrifice zone.

“Hyperion’s tar sands will destroy some of the best farmland in South Dakota,” Cable says. “It will destroy hundreds of years of quality air and water.”

Cable looked into emissions from similar refineries in Texas, and he believes the toxic emissions estimated by Hyperion in their permit application are understated by nearly a factor of ten.

According to their permit application, Hyperion plans to spew a combined 3,000 tons of nitrogen oxides and carbon monoxide “responsible for smog and ground-level ozone”, nearly 300 tons of ammonia, over 800 tons of sulfur dioxide (which causes acid rain), nearly 500 tons of highly carcinogenic volatile organic compounds, over 3,000 tons of asthma-inducing particulate matter, and more

than 19 million tons of carbon dioxide.²⁶

The emissions from this single source will all but guarantee South Dakota’s failure to meet the EPA’s National Ambient Air Quality standards. The microscopic soot particles that will be released by the ton from Hyperion are the most dangerous form of particulate matter, capable of penetrating deep into the lungs, causing respiratory disease and increasing risks of heart attacks.

Hyperion also intends to withdraw ten million gallons of water a day from the Missouri River, but the company hasn’t yet released a plan for what they will do with the wastewater once it has been used to process the toxic tar sands oil.

Save Union County’s fight against the tar sands giant recently made enormous progress. Based on a legal challenge that Cable and his neighbors filed against Hyperion, the South Dakota Department of Environment and Natural Resources declared Hyperion’s permit application incomplete and denied Hyperion’s initial application to pollute Union County’s air. Cable says it will be at least a year before the project can move forward. Cable is proud that he and his neighbors were able to achieve this victory in the face of tremendous pressure from the powerful and well-funded oil company.

For the moment Cable is taking a breath of clean air, but he knows Hyperion’s backers will not quit easily. He’s preparing for a long fight ahead to protect Union County, and the recent victory has strengthened his resolve.

“[They] thought they had a slam dunk, but we took a stand to protect our home,” Cable says. “They didn’t expect so much resistance, but we’re committed to keeping Hyperion and tar sands from destroying our county.”

CONCLUSION

THESE STORIES REPRESENT JUST A FRACTION OF THE PEOPLE WHO SUFFER THE TRUE COSTS OF TAR SANDS OIL. THERE ARE MANY MORE PEOPLE WHOSE STORIES REMAIN UNTOLD.

America does not need to put its own citizens and environment at risk just so foreign oil companies can increase their profits. Instead of sacrificing our drinking water, air, and farmland to import the world’s dirtiest oil, we should be investing in clean energy.

Wind, solar, efficiency measures, and a 21st-century transportation system will help end our dependence on oil and stop destructive projects like The Keystone XL pipeline. In fact, just increasing our fuel economy by 2.5 miles per gallon will save more oil than the largest tar sands pipelines can deliver.²⁷

Oil is a dirty and dangerous form of energy—and tar sands oil

is scraping the bottom of the global oil barrel. For decades, the oil industry ignored tar sands because they are among the dirtiest and most expensive fuels to produce in the world. But instead of backing innovations to break our dangerous addiction to a quickly vanishing and toxic source, the oil industry wants to lock in our dependence on oil for years to come.

For Americans, the costs are too high and the benefits are too low. We are a nation of innovators, and expanding our reliance on dirty tar sands oil represents a huge step backwards in our progress towards a clean energy future.

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CREDITS

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