

Sally Schemanski is a former Chairperson for CACC and is a long-time CACC member and Wheatland volunteer. She is a diligent protector of our watersheds and she loves to dance!

Big money, Big Industry and Big Environmental Disaster:
Alberta Tar Sands and Why We Should All Push for Sustainable Energy
By Sally Schemanski

Big money, big industry and the planets biggest environmental disaster ever! You might think this is going on in some underdeveloped, third world country where no one is paying attention. But it is happening right in our backyard in Alberta, Canada, our neighbor to the north. It is the Alberta Tar Sands and it is considered the worst ecological disaster in the world. It is called the "toxic sacrifice zone". Ask your neighbor or relative or co-worker and most likely they have no knowledge of this vast destruction. One would think that this would be on the national news, since it affects the entire planet.

Tar sands consist of sand, clay, water and also bitumen, which is a hydrocarbon - a heavy crude oil. The largest reserves of accessible tar sands are located in Alberta, Canada and estimated to provide 179 billion barrels of crude oil. The area is now producing 1.4 million barrels per day (bpd) and is expected to expand to 6.5 million bpd. Only Saudi Arabia with a production of 9 million bpd is larger.

Conventional open pit mining is used to recover 20% of this crude oil. The forest is clear-cut and a large pit is dug. The tar sands are loaded on to very big trucks that use 50 gallons of diesel fuel per hour. They are taken to a facility where the tar sands are heated into a liquid and the bitumen is separated from the sand and clay. The other 80% is recovered by in situ production. Pipes are inserted deep into the earth and steam is inserted to heat up the tar sands and liquefy the bitumen and pump it to the surface. Both of these processes require large amounts of energy and water and leave behind massive amounts of toxins.

The area of tar sand operation is the size of Florida and used to be covered by a Boreal forest ecosystem dominated by water. A pristine jewel. It is on the path for four major North American flyways for migrating birds and a critical nesting habitat for songbirds and water birds. It is home to indigenous people. To recover the oil out of the ground, the oil companies have ripped the life out of the earth and left behind a stark, lifeless, toxic landscape. Now it is covered with toxic ponds, open pit mines, refineries and pipe lines. It is the 2nd fastest source of deforestation. The Boreal ecosystem contains one quarter of the earth's forests and 11% of our carbon storehouse. There are 840 million cubic meters of toxic liquid tailings in ponds equal to 330,000 Olympic-sized swimming pools. The ponds span 50 square miles (twice the size of Manhattan) and can be seen from space with the naked eye. They are so toxic that scarecrows and propane cannons that fire every few minutes are left to discourage wildlife from using these death traps. One of the largest dams in the world was built to hold back the toxic liquid tailings along the Athabasca River. The Athabasca River is the 9th largest waterway in Canada and reaches all the way to the Arctic Ocean. The ponds leak 2.74 million gallons a day into the surrounding watershed and if that isn't enough to make you crazy, the sides of the

dams are made from dirt. The toxic ponds contain mercury, arsenic, polycyclic aromatic hydrocarbons (PAHS), salts and naphthenic acids. The level of these chemicals continues to rise and the toxic toll will be staggering, if the operations continue or expand. There is no monitoring at all of the toxic chemicals traveling through the groundwater.

Every barrel of oil requires 4 to 5 barrels of water and at the present time these operations are using the same amount of water that a city of 2 million people uses. Only 5-10% of the water can be returned because of the toxicity.

Every barrel of oil requires 1000 cubic feet of natural gas and it is estimated by 2012 the tar sands operation will use as much gas as is needed to heat all the homes in Canada.

There is movement to build nuclear power plants to fuel these operations. Canada would be the first country to use nuclear power to accelerate fossil fuel production.

These operations emit 3-5 times more greenhouse gas pollution than conventional oil. At present, 40 million metric tonnes of gases are emitted each day. It is estimated that this will rise to 80 million metric tonnes. By 2020, this would be 12% of Canada's emissions and account for 44 % of their total increase in emissions over that period. In addition, the extraction process requires four tons of earth to process one barrel of oil.

Government oversight is extremely lacking or outsourced to the industry itself. Environment Canada was not involved in the design of those "state of the art ponds" with the earthen dams. A Parliamentary Committee - The Standing Committee on Environment and Sustainable Development destroyed copies of their final report on tar sands pollution. This was an 18-month investigation of a 200 billion dollar industry. In many instances the responsibility is passed on to someone else or simply ignored. Alberta's Premier Ed Stelmack thinks these operations are a safe alternative to deep offshore oil wells. Big Money talks here.

This story continues its path of destruction over big areas of the United States. Most of this thick, heavy, tar like oil along with its toxic emissions is sent to the United States for refining. Refineries for tar sand are being built or expanded all over the U.S. Whiting, Indiana, Lima, Ohio, Toledo, Ohio, Commerce City, Colorado, Rosemont, Michigan, Superior, Wisconsin and Detroit, Michigan are all communities where refining of this dirty oil is being done. The air emissions from these refineries include sulfur dioxide, nitrogen oxide, carbon monoxide, volatile organic compounds, particulate matter and heavy metals.

This dirty toxic oil reaches these refineries through big, big, big pipelines. The expansion of the tar sand operation is only possible if there are more pipelines in service. These pipelines cut through thousands of miles of sensitive habitat in the heartland of America and disrupt the lives of farmers, ranchers and wildlife. The pipeline that delivers much of this dirty oil is called The Keystone Pipeline System built by TransCanada.

The first section of this pipeline is Keystone Phase 1. It was completed in June 2010 and

runs from Hardisty, Alberta to Wood River and Pakota Illinois. It passes through North Dakota, South Dakota, Nebraska, Kansas and Missouri. It is 1,853 miles long; 435,000 bpd flow through it and it costs 12 billion dollars.

The 2nd section is Keystone Phase 2. It runs 298 miles from Steele City, Nebraska to Cushing, Oklahoma. It is scheduled for construction in 2010 and should be in service in 2011 delivering 590,000 bpd.

The next phase is known as the TransCanada Keystone XL. It is still in the regulatory stage. The expansion is 1,661 miles long and will move oil from Hardisty, Alberta to Port Arthur, Texas. It also includes the construction of 30 fossil fuel pumping stations along the way needed to push this heavy molasses like unrefined crude through the pipeline. If the production of oil is increased by 3 million bpd, carbon dioxide increases will be equal to the emissions of 1 million cars. TransCanada is requesting a safety waiver to save money on this proposed pipeline. This includes building a thinner pipe and pumping the oil at pressure that exceeds normal limits and current pipeline safety. They have no public emergency plan in place in case of a pipeline spill. Shame on these corporations for putting profit before sustaining life on earth.

The oil companies in Canada are required by law to return the area to conditions prior to operations. Restoration will never return the biodiversity and vegetation will never be restored to its prior state. E.O. Wilson's words speak directly to the grave mistakes we are making by continuing on this path. "The one process now going on that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us."

A few miles from my home, Marathon is expanding its refinery to increase its capacity from 106,000 bpd to 115,000 bpd. Their project is named Detroit Heavy Oil Upgrade Project (HOUP) and its cost is 2.2 billion dollars. Construction began in June 2008 and completion is slated for 2012. Marathon is also building a 29-mile pipeline from Monroe County to Detroit. It crosses the River Raisin, which empties, into Lake Erie.

The tar sands operation cannot be our energy future. This is a backward step for our environment. Our addiction to oil and corporate greed causes insane behavior. The reckless expansion of the tar sands operation and pipeline will only lead to global disaster. Communities living in the tar sands area and downstream are filled with people that have increasing cases of cancer, lymphomas, leukemia and lupus. Even bile duct cancer, an extremely rare form, was found in one of the downstream residents. Tar sand oil is dirty, expensive and destroying our planet in a way never before witnessed by humanity. It must be stopped and it must happen now. This is the wrong choice for all life on this planet. Our addiction pollutes our water and air and is killing us. We must intervene.

Please spread the word to all people. Write to President Obama, Secretary Clinton, Congress and the Canadian government. Tell them to stop the TransCanada Keystone XL pipeline. Tell them to stop building oil refineries. Tell them to stop subsidies to the tar

sand operations. Tell them we want to stop our addiction to the destruction of our planet by dirty polluting oil. Tell them we want smart power-energy efficient, sustainable and renewable. We want an energy revolution.

No one is more eloquent than Jacques-Yves Cousteau in defining the difficult tasks that lay ahead. "For all the darkness that presently confronts us and our descendants, there is no reason to give up. There is every reason to take up the fight, because we have within our grasp the power of the people to force the right decisions. The more people, the more power, the more hope. "