

# Enbridge Line 61 Pipeline Construction Effects on Farmers in LaSalle County

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Enbridge Energy won eminent domain powers from Illinois in 2007 to construct Line 61, which is actually 2 pipelines 454 miles in length connecting terminals in Superior, Wisconsin to Flanagan, near Pontiac, Illinois. One pipeline carries Alberta bitumen (tar sands oil) south and the other pipeline carries back north the diluent chemicals used to thin the heavy tar sands in the pipeline. Line 61 was constructed in 2008-2009, over five years ago. The Flanagan terminal is now being connected to Cushing, Oklahoma and subsequently the Gulf Coast refineries and ports. Tar sands are, or will soon be, able to flow from Alberta, Canada to the Gulf Coast via Illinois. This has affected large areas of prime agricultural land, some of the richest and most productive in the United States.

The LaSalle County Farm Bureau sent survey forms to 75 land owners in LaSalle County, Illinois, in March, 2014, to learn what effects Line 61 had on growers in the county. The mailing list was taken from the 2006 Enbridge filing for eminent domain powers with the Illinois Commerce Commission. This list was not a complete representation of affected parties. It had several drawbacks including:

- some land had changed hands over the last 8 years, either through sale or inheritance, and some owners had probably moved, so not all current landowners with pipeline easements received a survey,
- the list did not include people who own land adjacent to the right of way, who also could have been affected by pipeline activities,
- the list was culled for addresses outside LaSalle County, so owners who own land in the county but live elsewhere did not receive an opportunity to participate, and
- most importantly, it did not include farm operators who lease land (though owners were asked to pass the survey along to their tenants if they wished)

Using this mailing list was the most expedient way to quickly gather the first round of data on the effects of this pipeline. Further delay would have put us into planting time for the 2014 corn and soybean crops, potentially reducing participation. But we have to recognize that the survey went to perhaps only a small subset of the people affected by this pipeline in LaSalle County.

From the 75 surveys mailed out we got 31 responses, which is a good response rate for this kind of informational survey (41% made the effort to respond, paying return postage themselves). There were both positive and negative responses, but the theme was resoundingly negative regarding the pipeline's effects on growers.

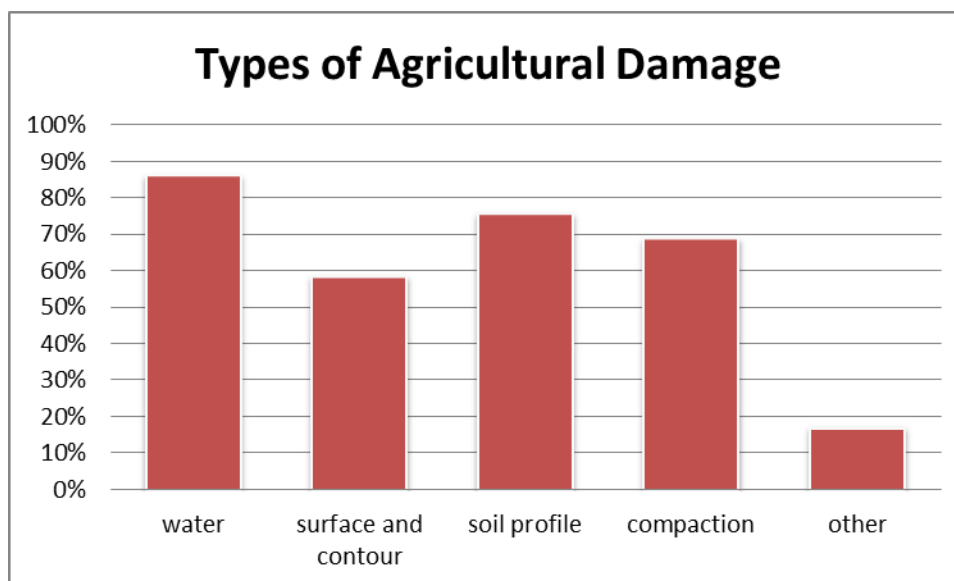
Of those responding, only 2 said there were no issues on their land caused by the pipeline construction. The other 94% had problems. Only 21% of those problems have been resolved, the other 79% of respondents with problems still have problems.

At this point, 5 years after the completion of construction and remediation, any remaining effects can be considered long-term. Almost three-quarters of affected growers appear to be suffering some form of long-term damage. To sum up, with a couple complimentary exceptions, typical comments included:

- “the pipeline was a nightmare”
- “they had no concern whatsoever for the land”
- “they had total disregard for existing tile”
- “they tore the farm up”

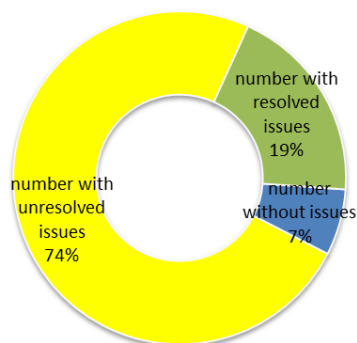
### Types of Damage

The types of issues farmers and land owners are experiencing range from drainage problems to soil profile (e.g.: intermixing subsoil and topsoil) and compaction.



Most respondents have more than one issue to deal with. The most prevalent is water related, with 86% of those with damage having problems with drainage resulting from the Enbridge activities. This may be fixable. Intermixing subsoil (reducing soil productivity and affecting drainage patterns) was second most prevalent, and ongoing problems from compaction (crushed soil structure reducing the

### Pervasiveness of Permanent Land Damage



space for air and water and making root penetration more difficult) are being experienced by more than two-thirds of those dealing with agricultural damage from the pipeline. Compaction and subsoil intermixing may be permanent forms of damage. Other problems include destroyed waterways, water pumped onto fields, removed property markers, and buried lumber from skids.

While a few owners reported that Enbridge put in new tile and made other remediation efforts that rectified their problems, others report:

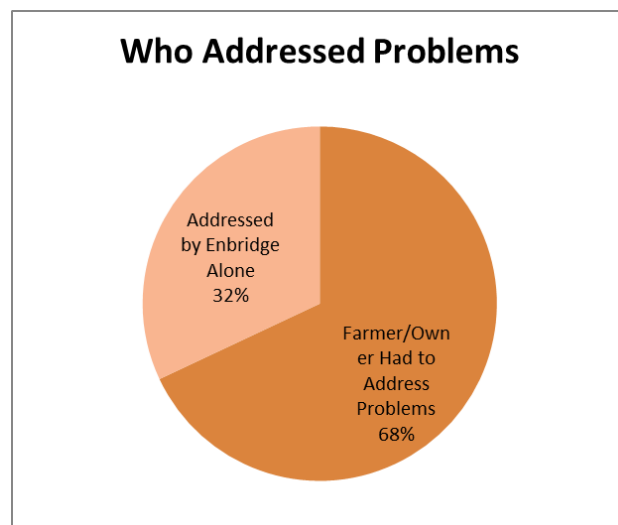
- “Drainage is terrible in this area over the pipeline!”
- “Compaction! Frost or rippers cannot go deep enough to undo the affected areas”
- “Still having issues. Enbridge said they would address issues but just passed from person to person, never put good faith effort to resolve issues.”
- “Hard to say how many hours spent on this. Ground condition and water drainage are still bad.”

## Effects of Problems

One of the untold stories with these pipeline activities is the amount of time it takes from productivity. Farming is a business. Like any business, staff productivity is paramount. If you sap the productivity of the people in the business, it hurts the business. One respondent said:

*“Compaction still a problem. Been working on it for years, hours too numerous to count... Deep tillage in mud is not very effective [when they did remediation], not in compliance with Agricultural Mitigation Agreement. They worked in very wet conditions, hauled pipeline across ground before the topsoil was removed. Their contractor had never seen the Ag Mitigation Agreement and did not follow it. Needed daily monitoring.”*

It’s not only before and during construction that farmers and land owners need to spend a lot of time monitoring and working on construction issues, but it appears they deal with the effects for years after



all the construction crews have gone. Many have been taking care of these problems themselves either partially or completely. Of those for whom issues have been addressed at least somewhat, 68% have had to address the issues themselves. Only 32% were able to rely on Enbridge for all the work done so far. And recall that only 21% of the respondents have had their issues resolved. For the other 79%, the damage seems long-term and time consuming. Asked separately about the expense (as opposed to the effort), 38% of respondents said they have had to bear some or all of the cost of remediation themselves.

The number of man-hours spent dealing with these issues has a cost. A farmer's time is worth something, just as any business owner's time has value. Those hours have been uncompensated. This is another form of taking, in addition to the land rights and crop revenues, but for most growers it has been a one-sided exchange.

If the average farmer only needed to spend 120 hours on this over his lifetime, a very low estimate, and only 75 farm "CEO's" are affected in LaSalle County (it actually affects both owners and tenants as well perhaps as adjoining owners and tenants), at an hourly rate of \$100 per business owner that would represent nearly \$1,000,000 in labor and management taking for this pipeline in this county alone. Statewide, if LaSalle County represents only 36 of the 125 miles traversed by Line 61 in Illinois, Enbridge might have absorbed \$3.5 million in management time from farming businesses.

### **Production Losses**

Revenue losses from yield reductions also remain a problem. When drainage, compaction, soil profile and other problems exist, they can affect the amount of grain the ground yields. These effects can be hard to document, particularly when the pipeline follows a diagonal path across fields. Most yield monitors can't capture or report data in ways that allow farmers to document yields from a diagonal strip across a field, even though the operators can see it on their monitors as they harvest.

There were many reports of yield loss, evidencing its pervasiveness. One farmer said "yield monitors [in the harvester] show 25-50 bushel-per-acre loss on the easement [in 2013]." Others said:

- "Some spots are not yielding at this time"
- "Yield reductions have occurred for several years after construction"
- "Yields are reduced 20 bushels for corn where the pipe is in the ground"
- "The yields over the pipeline have been 40-50 bushel less per acre for corn and 5-10 bushel less per acre for soybeans by the yield monitor on the combine"

Farmers were offered a settlement for a short period of reduced yields, but yield losses appear to be permanent. If these reports are representative, they indicate yield losses of about 16% of county average yields for 2013. The economic loss from 16% yield reductions in corn is \$150 per acre at current prices (current to when the losses were reported). This especially hurts now, at a time when grain farms are operating at breakeven levels.

How widespread could this effect be? Soil was affected across the entire length and width of their construction activities. The trenching occurred within a 60-foot wide easement and heavy equipment traversals occurred there as well as across the additional 90-foot wide construction easement. The pipeline traversed the length of LaSalle County for 36 miles on a diagonal zig-zag path. That would take up perhaps 655 acres in LaSalle County. If average revenue losses are \$150 per acre, this pipeline would be reducing production by at least \$100,000 per year in the county. That is, if the effects are confined strictly to where the easements lie. Drainage and compaction issues, for example, can affect water retention and drainage in adjoining ground. So, these estimates are probably low.

This could have an effect on farmers' production history, which is a major factor in insurance coverages, rents, and potentially land prices. With new farm bills, farmers may have to report production to re-establish yield histories as a basis for crop insurance claims. If their production histories suffer, their insurance coverage will be diminished. The effects will be lasting. If it lasts in perpetuity, at a common capitalization rate of 3.5% for farm land, this 16% yield reduction alone would contribute a \$4200 per acre loss to land value in addition to the other direct and indirect grower costs associated with the pipeline. In LaSalle County that would total about \$2,800,000 in agricultural value lost.

The pipeline route traversed perhaps 125 miles from Wisconsin to the Flanagan terminal. Using these estimates, owners in the state lost almost \$10 million in agricultural value and \$340,000 per year in production from this one pipeline right of way. Again, these estimates only consider the ground directly under easement, not any adjoining parcels that were probably affected.

### **Direct Costs to Growers**

Many growers had to put extra work into their fields where the pipeline work had effect. At a given farm this might have included:

- Ripping and subsoiling work
- Additional surface conditioning (e.g.: breaking up subsoil clods at the surface)
- Surface re-contouring and smoothing
- Tiling, waterway excavation, and other drainage work
- Additional fertilizer and lime application
- Additional weed and pest control measures
- Rock picking and scrap lumber removal
- Additional cover crop establishment and care

For example, a farmer may have had to spend 10 hours picking rock and scrap lumber before planting. He may have had to make 6 passes v-ripping and disking to remediate surface conditions and contours. Using the custom rate survey from Iowa State University, that farmer would have invested about \$154 per acre in direct cost related to the impact the pipeline had on him.

The survey form was not designed to capture this level of detail, but enough respondents indicated that they had to perform remediation work themselves that it is a significant factor. On those farms where the issues were addressed, 68% of operators had to remediate issues themselves. If the average cost of remediation so far was \$154 per acre, that would be over \$100,000 in uncompensated remediation costs taken from growers in LaSalle County without considering the much larger costs for eventual tiling, waterway and drainage work.

### **Loss of Rights and Opportunity Costs**

In addition to direct costs and loss of production value, Enbridge took away ownership rights such as opportunities for alternative use and development. These losses of rights and opportunities also have value. This affects not only the ground under easement but also the surrounding area. People may not want to build a house next to the pipeline, for example. Windmills can't be constructed along the

easements, and there are restrictions and risks associated with crossing the pipeline with any appurtenances to other operations.

Furthermore, farmers also have lost the right to unrestricted normal operations around the pipeline right of way. This affects not only farming, causing farmers to potentially change the way they do tillage and cultivation, but it also can cause growers to suffer additional damaging impact from other entities with easements, for utilities or transportation as two examples. One farm owner suffered double the damage from heavy equipment traffic along an electric utility easement because the utility refused to cross the pipeline right of way, re-routing construction operations to avoid it. The Enbridge easement caused this electric utility to traverse across his fields to reach a neighbor from the west rather than taking a shorter route from the east that would have limited the impact to only the neighbor's field.

Still more, none of this captures the increased risk to operations and environmental hazards from the pipeline. Supervisory burdens increase when petroleum company representatives must approve plans or schedule representatives to be on site during work. There are added concerns about drainage work on the easements, for example – farmers may be concerned about trenching or excavating in the area to fix agricultural problems. There is also the risk that any leaks or spills could ruin the land, ruin the aquifer, and cause health problems in the area.

### Enbridge Responsiveness

People are generally dissatisfied with Enbridge's response to their concerns. One-fifth (21%) reported being extremely dissatisfied with Enbridge's responsiveness to their problems, and nearly half (43%) were generally dissatisfied. Only 25% (7 respondents – not everyone completed this portion) were satisfied at all.

It is almost the same for the *results* of Enbridge's response: 43% were somewhat or very dissatisfied with the results they got from any remediation while only 21% were at least somewhat satisfied with the results.

### Looking Ahead

Asked if they were in favor of another pipeline, only 4 owners said they are. It's notable that those appear to be land owners and not tenants. In opposition were 68% of respondents, and, showing strength of feeling, half of all respondents (50%) indicated they "detest the idea" of a new pipeline.

This was a first time experience for most of these people. Line 61 blazed a new trail for oil pipelines outside of established routes closer to the Chicago area, where the Midwest refineries and petroleum processors are. People in LaSalle County did not know what to expect in 2008. Now they do. Those affected are strongly opposed to new pipelines. They have not been "made whole" from the last one and will be dealing with its effects for a long time.

Some of their forward-looking comments include (each from a different person):

- "Pipelines should follow easements along state and interstate highways. It is not right to take private property"

- “It is odd they have no trouble getting a pipeline here when they cannot build the Keystone pipeline in states that are barren”
- “Would rather not go through the mess and trouble again”
- “We hope the Farm Bureau will take a stand opposing pipeline expansion”
- “This is a company that makes \$1 billion in pre-tax profit every year. Why does it need eminent domain? The 2006 ICC filing claimed this pipeline was for Illinois residents. Why did they connect it to the Gulf? They claim it creates jobs. I have talked to no one from Illinois who ever worked for Enbridge. Pattern of misrepresentation”

## Extent of the Problem

There are many pipelines in LaSalle County, of which Enbridge Line 61 is just one. Looking at the map at right, there are at least 12 major pipelines crossing the county. This shows the extent of damage done to farmers and field productivity so far.

If you believe that pipeline construction activity creates jobs, then it also means these effects destroyed jobs. If politicians and profit-oriented companies can apply a multiplier to equate construction spending to jobs (which last a year) then the same multiplier would show hundreds of jobs lost in Illinois from the adverse effects of Line 61.

Looking at a national map, Plains states like South

Dakota and Nebraska have comparatively fewer pipelines. This is surprising in light of the fact much of the petroleum source is in Alberta and the destination appears to be directly south of these states in Texas and Oklahoma.

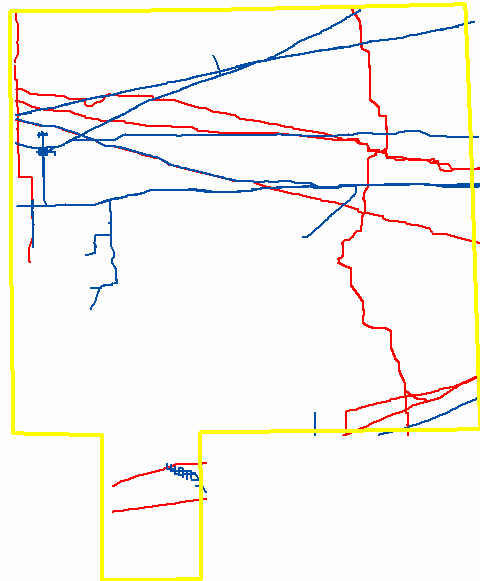


Figure 1: Oil & Gas Pipelines in LaSalle County, IL.  
Source: National Pipeline Mapping System - [www.npms.phmsa.dot.gov](http://www.npms.phmsa.dot.gov)

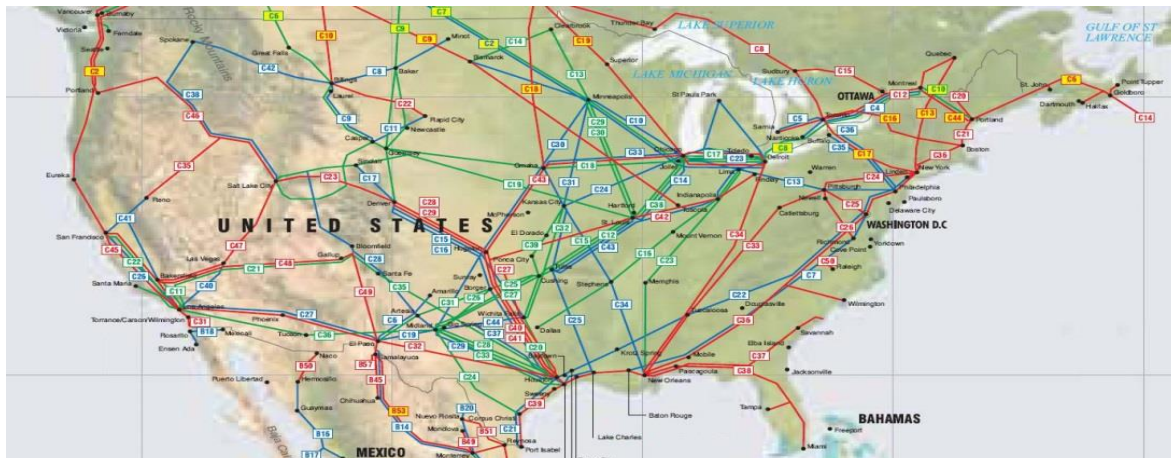


Figure 2: Source: Theodora.com

## Summary

Damage to agricultural land in LaSalle County from Enbridge Line 61 construction activities is prevalent, with 94% of respondents reporting some kind of agricultural problem as a result of Enbridge's new pipeline.

The damage appears permanent. More than 5 years after "remediation" 79% of the problems still exist. Most growers are experiencing drainage issues, soil profile problems, and surface issues as a result of Enbridge's pipeline.

Enbridge has not been responsive enough to these problems, and their remediation efforts have been inadequate: 68% of growers who addressed issues caused by Enbridge have had to address the issues themselves. Almost half are dissatisfied, and over 20% of respondents are **extremely** dissatisfied with Enbridge's responsiveness to their problems. Where Enbridge *has* responded, 43% are dissatisfied with the results they got.

The pipeline has been expensive to land owners and operators. Large losses of production value are being experienced, the productivity of land and labor have been diminished, and large amounts of precious time have been taken. Line 61 alone has cost land owners in LaSalle County and Illinois millions in direct and indirect costs:

Cost estimates	LaSalle	IL
Lost production value	\$ 2,800,000	\$ 9,500,000
Managerial Time	\$ 1,000,000	\$ 3,500,000
Direct Cost	?	?
Annual Yield Loss	\$ 100,000	\$ 350,000
Jobs lost	?	?

For Line 61, these losses appear to have been insufficiently compensated.

Looking ahead, almost nobody wants another pipeline and the vast majority are adamantly against it. Problems need to be fixed. Future pipelines need to take more care and be under closer supervision, and pipeline companies should make more fair and adequate compensation for their takings.

## What's Fair

Land Owners AND tenants should be made whole – it is not incumbent on the unlucky individuals in the path of a pipeline to bear the cost and loss of rights in order to enable a private enterprise to make billions in profits. If they are left with no say about the pipeline route, growers should at least receive full reparations for their time, loss of property rights, economic losses and other damages

Fix all existing problems immediately. Soil intermixing probably cannot be fixed, and deep compaction may not be reparable, but other issues can still be remediated. There should be a coordinated effort to remediate 100% of the pipeline path including:

- Comprehensive tile and other drainage solutions offered to every farmer in the easement route – it is most appropriate for Enbridge to be responsible for all subsoil work on its easements so farmers are not burdened with the responsibility for understanding the location and procedures involving pipelines and the stress of incurring the risk of tile and excavation work where Enbridge put pipe
- More effective compaction relief beyond ripping the top layers of soil, perhaps to include:
  - Study taking the easement land out of row crop production for some period and plant with deep rooted plants to break deep compaction layers where subsoiling equipment can't reach, with yield and/or market rate rent settlement paid to farmers for the losses during this period
- Compensation for owner/operator time and labor in remediation done so far
- Offer re-contouring where necessary to fix surface drainage problems and irregular ground shapes

A theme heard loud and clear from LaSalle County farmers is: No More Pipelines in Prime Farmland – put them in unproductive areas like deserts or along roads. Routing should be discussed openly with all affected parties, not unveiled after back room negotiations.

If pipelines must cross productive farmland, compensation must be fair and include fair exchange of value for, at a minimum:

- Full land value for loss of rights and impact on future operations (no future building, no wind power, no trellis-based crops, etc. and restrictions on normal farming activities like tiling, waterway excavation, post installation, etc, affect the whole farm and not just one strip of land, which may be compensable with the full value of the strip of land)
- At least \$12,000 per land owner for time taking and impact on the business (time to monitor and manage the whole project lifecycle, especially when contractors have never heard of an Agriculture Impact Mitigation Agreement, the land owner has a lot of work to do, and after the project is completed there is even more work to do)
- At least \$4200 per acre for financial impairment from permanent productivity losses (a few years of crop damage is insufficient – the evidence shows that damage is permanent)
- Full custom rate payment for any and all remediation activities performed at the discretion of the grower, including subsoiling, surface conditioning, contouring, rock and scrap picking, etc.
- Complete pattern tile work not only on the permanent and construction easements but also in adjoining areas that drain onto or away from the easement – to be done after the trench is filled and other remediation work done (so it's not crushed again)
- Complete waterway excavation, tile, and cover crop where affected
- Reimbursement for additional inputs, including lime, fertilizer, herbicide and pest management

Any new pipeline should offer to follow triple-stacking procedures to remove the topsoil and keep it separate from the 2 distinct layers of subsoil in our area. All 3 layers should be kept separate at all

times, including when it is being replaced. There was clearly not enough care taken in this aspect last time.

If there is a next time, there should be someone independent of the pipeline company with authority to stop construction activities if the Agriculture Impact Mitigation Agreement is not being followed. Once the topsoil and subsoil are mixed it is too late to fix. The timing of soil removal and replacement should be more appropriate, not when it is too wet during or after precipitation events. Doing subsoil remediation in saturated conditions may be not only pointless but could worsen the problems. Inadequate or improper tile work sometimes does not show itself for one or more years.

*Author: Scott Cleave, manager of Cleave Farms*

## Addendum – Sample Images of Problems

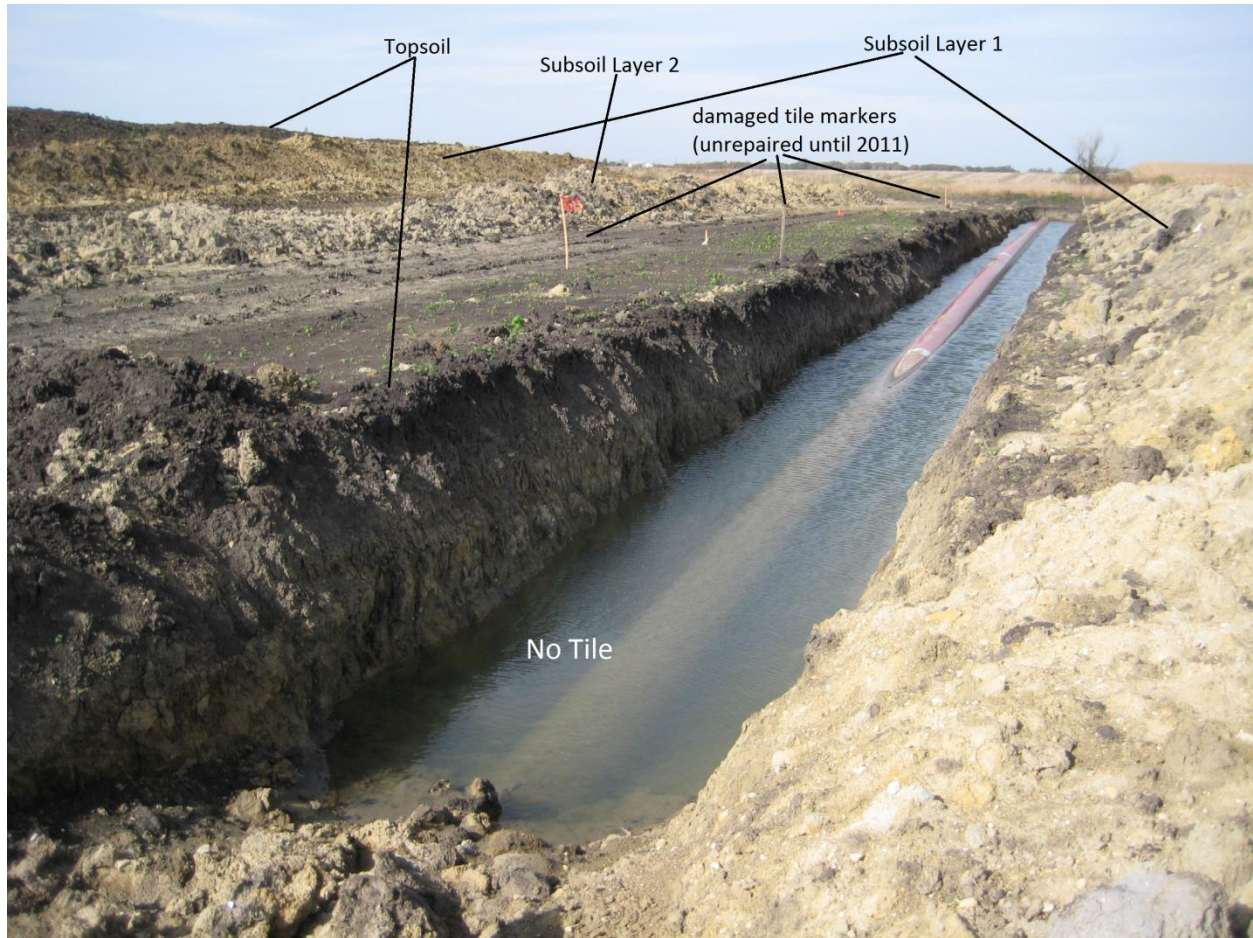


Figure 3: Cleave Farms. Drainage systems destroyed, new tile either nonexistent or crushed on backfill. Cleave Farms manager documented, emailed and called for 2+ years to get a response (80+ hours). Subsoil intermixing irreparable.



Figure 4: Unnamed farm in northern LaSalle County. Subsoil layers and topsoil intermixed on replacement. No tile or tile damaged and not functioning







Figure 5: working in wet, saturated soil conditions. Note the 2 piles of subsoil



Figure 6: Note the subsoil on ground and tires - after ripping to 'relieve' compaction. Soil was intermixed – irreparable, compaction possibly made worse by working in saturated conditions



Figure 7: Tile damaged, water courses changed (sidewall compaction, channel change, ...). Enbridge knew there was tile there. Tile not repaired, new tile over pipe crushed on backfill of trench.

## Samples of crop damage from drainage, compaction, and soil profile problems

