

MINUTES
REGULAR MEETING OF THE BOARD OF LAND COMMISSIONERS
Monday, December 17, 2012, at 9:00 a.m.
State Capitol
Helena, MT

Please note: *The Land Board has adopted the audio recording of its meetings as the official record, as allowed by [2-3-212, MCA](#). These minutes provide an abbreviated summary of the Land Board discussion, public testimony, action taken, and other activities. The time designations listed are approximate and may be used to locate the referenced discussion on the audio recording of this meeting. Access to an electronic copy of these minutes and the audio recording is provided from the Land Board webpage at <http://dnrc.mt.gov/LandBoard>. The written minutes summary, along with the audio recordings, are listed by meeting date on the Land Board Archive webpage.*

Members Present

Governor Brian Schweitzer
Attorney General Steve Bullock
Commissioner of Securities and Insurance Monica Lindeen
Secretary of State Linda McCulloch
Superintendent of Public Instruction Denise Juneau (via telephone conferencing)

Members Absent

None

Testifying Staff

Mary Sexton, DNRC Director
Hugh Zackheim, FWP Lands Program Manager

Attachments

Related Materials, Attachment 1 – Sign-in sheet
Related Materials, Attachment 2 – Northern Plains Resource Council information (1212-10E)
Related Materials, Attachment 3 – City of Whitefish letter (1212-3C)

Call to Order

00:00:00 Governor Brian Schweitzer called the meeting to order. Ms. Juneau moved to approve the November 19, 2012, minutes. The motion was seconded by Mr. Bullock and carried unanimously.

Business Considered

1212-1 FWP: Wildlife Management Area Addition – Seven Sisters

00:00:19 Ms. Sexton
00:00:38 Mr. Zackheim gave an overview of the item.

00:03:01 Ms. McCulloch moved to approve the addition. The motion was seconded by Mr. Bullock and carried unanimously.

1212-2 FWP: Wildlife Management Area Land Donation – Spring Coulee

00:03:12 Ms. Sexton
00:03:28 Mr. Zackheim gave an overview of the item.
00:04:28 Mr. Bullock moved to approve the donation. The motion was seconded by Ms. Juneau and carried unanimously.

1212-3 Timber Sales:

A. Scout Lake #3

B. Scout Lake #4

00:04:59 Ms. Sexton gave an overview of items 1212-3A and 1212-3B.

00:06:55 Ms. McCulloch moved to approve items 1212-3A and 1212-3B. The motion was seconded by Mr. Bullock and carried unanimously.

C. Spencer Lake South

00:07:10 Ms. Sexton gave an overview of the item.

00:08:36 Ms. Lindeen moved to approve the Spencer Lake South Timber Sale. The motion was seconded by Ms. McCulloch and carried unanimously.

1212-4 Oil and Gas Lease Sale (December 4, 2012)

00:08:43 Ms. Sexton gave an overview of the item.

Public Comment

00:09:54 Colton Hash

00:12:11 Ms. McCulloch moved to approve the oil and gas lease sale. The motion was seconded by Ms. Juneau.

Board Discussion/Comments

00:12:21 Governor Schweitzer

00:13:10 Ms. Sexton

00:13:17 Governor Schweitzer

00:13:50 The motion to approve the lease sale carried unanimously.

1212-5 Disclaimer of Interest – O’Neill Property

00:13:57 Ms. Sexton gave an overview of the item.

00:15:14 Ms. Lindeen moved for approval of disclaimer of interest contingent upon completion of the formal survey. The motion was seconded by Ms. McCulloch carried unanimously.

1212-6 Gas Storage Lease – WBI Energy Transmission, Inc.

00:15:35 Ms. Sexton gave an overview of the item.

00:17:05 Ms. Juneau moved for approval of the gas storage lease. Ms. McCulloch seconded the motion.

Board Discussion/Comments

00:17:15 Governor Schweitzer

00:19:46 The motion to approve the gas storage lease carried unanimously.

1212-7 Communitization Agreement – Petro-Hunt, LLC

00:19:48 Ms. Sexton gave an overview of the item.

00:20:14 Ms. Lindeen moved to approve the communitization agreement. The motion was seconded by Mr. Bullock and carried unanimously.

1212-8 Land Banking Parcel: Final Approval for Sale

00:20:22 Ms Sexton gave an overview of item.

00:21:13 Ms. McCulloch moved for final approval for sale of the parcel. Ms. Lindeen seconded the motion.

Board Discussion/Comments

00:21:24 Ms. McCulloch

00:21:28 Ms. Sexton

00:21:39 The motion carried unanimously.

1212-9 Administrative Transfer/Land Banking Acquisition: Final Approval – Old Department of Corrections (DOC) Building

00:21:42 Ms Sexton gave an overview of item.

00:24:08 Ms. McCulloch moved for final approval of the transfer/acquisition. Ms. Juneau seconded the motion.

Board Discussion/Comments

00:24:21 Ms. McCulloch

00:24:31 Governor Schweitzer

00:24:43 Ms. McCulloch

00:24:49 Governor Schweitzer

00:24:53 Mr. Bullock

00:24:59 Ms. Sexton

00:25:21 Governor Schweitzer

00:26:28 The motion to approve the transfer/acquisition carried unanimously.

1212-10 Easements

A. Rights-of-Way

00:26:31 Ms Sexton gave an overview of item.

00:27:14 Mr. Bullock moved to approve the rights-of-way. The motion was seconded by Ms. Lindeen and carried unanimously.

B. Cost Share Agreement - Monture

00:26:31 Ms Sexton gave an overview of item.

00:27:57 Ms. Lindeen moved to approve the cost share agreement. Ms. McCulloch seconded the motion.

Board Discussion/Comments

00:28:05 Governor Schweitzer

00:29:56 Mr. Bullock

00:30:07 Governor Schweitzer

00:30:18 The motion to approve the cost share agreement carried unanimously.

C. Reciprocal Access Agreement – Bar W

00:30:23 Ms Sexton gave an overview of item.

00:31:52 Ms. McCulloch moved to approve the reciprocal access agreement. The motion was seconded by Ms. Lindeen and carried unanimously.

D. Transmission Line Easements – MATL

00:32:08 Ms Sexton gave an overview of item.

Public Comment

00:34:20 Harley Harris, MATL legal counsel

00:36:34 Ms. McCulloch moved to approve the MATL easements. Ms. Juneau seconded the motion.

Board/Public Discussion

00:36:44 Ms. Lindeen

00:36:56 Ms. Sexton

00:37:13 Mr. Harris

00:38:01 Governor Schweitzer

00:40:50 The motion to approve the MATL easements carried unanimously.

E. Pipeline Easements – Keystone Pipeline

00:40:55 Ms Sexton gave an overview of item.

Public Comment

00:48:28 Clayton Webb, Northern Plains Resource Council (NPRC) – Attachment 2

00:48:44 Chris Cabazos, MT APL- CIO

00:49:50 Mr. Hash

00:53:18 Jim Jensen, Montana Environmental Information Center (MEIC)

00:56:40 Mr. Bullock moved to approve the Keystone Pipeline Easements contingent upon: (1) issuance of the Presidential Permit; and (2) that the easements contain the protections included within the state and federal permitting process . Ms. Lindeen seconded the motion.

Board Discussion/Comments

00:56:58 Mr. Bullock

00:57:16 Ms. Sexton

00:57:34 Ken Morris, Trans Canada

00:58:06 Governor Schweitzer

00:59:01 Ms. Sexton

01:00:25 Governor Schweitzer

01:00:34 Ms. Sexton

01:01:00 Tom Butler

01:01:06 Governor Schweitzer

01:02:27 Mr. Jensen

01:02:30 Governor Schweitzer

01:02:40 Mr. Jensen

01:02:44 Governor Schweitzer

01:02:49 The motion to approve the easements contingent upon: (1) issuance of the Presidential Permit; and (2) that the easements contain the protections included within the state and federal permitting process carried unanimously.

General Public Comment

01:02:54 Governor Schweitzer

01:03:35 John Muhlfeld, Whitefish Mayor - Attachment 3

01:08:32 Governor Schweitzer

01:08:37 Heidi Van Everen, Whitefish Legacy Partners (WLP) executive director

01:09:32 Ms. Sexton
01:09:35 Lin Akey, WLP chair
01:10:02 Ms. Sexton
01:12:14 Governor Schweitzer
01:13:21 Ms. McCulloch
01:14:28 Governor Schweitzer

Adjournment

01:14:51 Adjournment

PRESIDENT

ATTEST

/s/ Steve Bullock
Steve Bullock, Governor

/s/ John E. Tubbs
John E. Tubbs, DNRC Director

December 17, 2012

Re: Keystone XL easement

Governor and Land Board members,

Thank you.

I represent a group of 31 families along the route of the Keystone XL pipeline. We organized ourselves into the Northern Plains Pipeline Landowners Group in order to jointly negotiate an agreement with TransCanada to cross our land with their pipeline. Because we are so directly affected by this project, we've been paying attention more than the average Montanan and want to direct you down one particular path of inquiry that we believe is necessary as you consider granting an easement at major river crossings.

There is a huge red flag with one of the sections of easement before you today, namely the Missouri River crossing. The key unanswered question is: how safe of a burial depth is a safe depth? You see, the Keystone XL will cross just below the spillway of the Ft. Peck dam – just about 1 mile away, in fact. In the summer of 2011, Ft Peck was opened to release a very large amount of water. This led to scour holes in the river of up to 100 feet, and I will submit to you with these comments one of the news paper accounts of this. To this point burial depth plans at major river crossings have the Keystone being buried just 25-30 feet. Located so close to the spillway, if water needs to be released again within operational years of the pipe, there will be a large amount of erosion and it is not unlikely that the pipe will be completely exposed.

As I'm sure I don't need to remind you, the Exxon pipeline disaster on the Yellowstone River was due in part to exposure.

An academic report released in July 2011 by a University of Nebraska professor analyzed the scenario if there would be a spill at a major river crossing and found that a spill into a major river such as the Missouri could contaminate enough water with benzene, a carcinogen, to form a plume that could extend more than 450 miles at concentrations exceeding the Safe Drinking Water Act Maximum Contaminant Level.

We have prepared packets of information for your review to facilitate your responsibility of stewardship for our great rivers and the people and economies that depend on them.

We ask that you address the issue of proper burial depth, at the Missouri River particularly, when you grant the easements for this unprecedentedly large pipe (36"), carrying higher than average corrosive tar sands, in what some have criticized as sub-standard steel.

We would also like to note that when the final supplemental EIS is released it just may have some additional engineering and environmental designs that should weigh into the language you put on

the easement you grant. The company does not have the presidential permit yet - you have the time and should take the time to make sure two of our state's greatest treasurers, the Missouri and Yellowstone Rivers are sufficiently protected.

Lastly, I can't reveal too much but I'll just tell you that you're not getting a good deal financially on this length of this pipe.

Thank you for your consideration.

A handwritten signature in black ink, appearing to read "Darrell Garoutte". The signature is written in a cursive style with a large initial "D".

Darrell Garoutte
Chair, Northern Plains Pipeline Landowners Group

872 Prairie Elk Rd
Wolf Point, MT 59201

Attachments

Attachments

Darrell Garoutte, Northern Plains Pipeline Landowners Group

Testimony before State Land Board regarding Keystone XL easement

December 17, 2012

1. Memo to Mary Sexton, DNRC regarding Missouri River and Keystone XL, August 31, 2011
2. Bismark Tribune article, June 28, 2011
 - information on 100 foot scour holes on the Missouri River summer of 2011
3. Billings Gazette article , June 11, 2011
 - information on amount of water released from Ft. Peck damn spillway
4. Billings Gazette article, August 16, 2011
 - information on planned burial depth being 25 feet at major river crossings
 - information on amount of oil spilled into Yellowstone by Exxon pipeline rupture
5. Executive summary, Analysis of Frequency, Magnitude and Consequence of Worst-Case Spills from the Proposed Keystone XL Pipeline, by John Stansbury, University of Nebraska
 - information on Keystone XL spill risk at Missouri and Yellowstone Rivers
6. Associated Press/Christian Science Monitor article, July 28, 2010
 - information on the Enbridge pipeline spill in the Kalamazoo River in Michigan
7. Billings Gazette Guest Opinion, Wesley James, June 27, 2009



MEMO

To: Mary Sexton, Montana Oil Pipeline Safety Review Council

From: Northern Plains Resource Council

Contact:

Darrell Garoutte, Chair, Northern Plains Pipeline Landowners Group
Olivia Stockman, Director of Organizing and Campaigns

Date: August 31, 2011

Re: River Bed Erosion on the Missouri River: Needed Research for Construction Best Practices for Pipelines, implications for the Keystone XL pipeline project

Background:

It has recently come to our attention that there are “scour holes” – areas where the Missouri River’s velocity has severely eroded the river bed – in North Dakota that are 100 feet deep¹. The Keystone XL pipeline is proposed to cross the Missouri River just barely downstream (less than 5 miles) of the Fort Peck Dam². The Fort Peck Dam has released a record amount of water this season into the Missouri River³. More wet years like this one are likely, or at least possible.

The Exxon Silvertip pipeline spill on the Yellowstone River at Laurel Montana on July 1 was purportedly due in large part to erosion because of the high and fast water season. And last year, an Enbridge pipeline erupted spilling into the Kalamazoo River. The Keystone XL pipeline is to be bored only 25 feet under major river crossings, according to TransCanada statements in the press, and looks to be about 30 feet deep in the diagrams within the Final Environmental Impact Statement, released Friday⁴.

According to an academic analysis of Keystone XL spill scenarios at major river crossings, the worst-case spill volumes from the Keystone XL pipeline for the Missouri and Yellowstone crossings were estimated to be 122,867 Bbl and 165,416 Bbl, respectively.⁵ Among numerous toxic chemicals that would be released in a spill, benzene (a human carcinogen) released from the worst-case spill into a major river (e.g., Missouri River) could contaminate enough water to

¹ http://bismarcktribune.com/news/local/article_dceb52ee-a1d1-11e0-8b7e-001cc4c03286.html

² Refer to the maps in the EIS for the project, or for a simple approximation google-map the address of the landowner at the Missouri River crossing: 250 S. River Road, Nashua Montana.

³ http://billingsgazette.com/news/state-and-regional/montana/article_e991b8f3-8212-54f8-9a1c-7c75c6f5a0c0.html

⁴ Final EIS, Appendix D, Drawing 4360-03-ML-002 Missouri River

⁵ <http://watercenter.unl.edu/downloads/2011-Worst-case-Keystone-spills-report.pdf>

form a plume that could extend more than 450 miles at concentrations exceeding the Safe Drinking Water Act Maximum Contaminant Level.⁶

Questions:

1. Are there "scour holes" currently on the Missouri River closer to the proposed Keystone XL crossing?
2. Could there be a lot of erosion and deep scour holes in future years?
3. What is the optimum burial depth for new pipelines, including the Keystone XL pipeline?

Requested action steps:

Research and analysis is necessary in light of the State Department's failure to recognize the risk that a mere 25 foot burial depth might pose at major river crossings. The State Department will be taking comment on the final EIS and upcoming National Interest Determination until October 9, 2011. We request your immediate attention and official comment by the October 9 deadline to the State Department. Thank you for your attention to this serious matter.

⁶ Ibid.

Missouri River scour threatens property, digs deep



JUNE 28, 2011 6:00 PM • BY CHRISTOPHER BJORKE
BISMARCK TRIBUNE

The state Water Commission is investigating parts of the Missouri where heavy erosion has created river depths of 100 feet and washed away another structure.

The river carried away a cabin in the Tokach Timberhaven area late Sunday or early Monday morning, said Tammy Lapp-Harris, Morton County emergency manager.

"This one's completely gone. We're not sure where it is," said Lapp-Harris. The building's location was on Dad's Drive, about eight miles south of Fort Lincoln, east of Highway 1806. Authorities are trying to identify the owners of the cabin.

That area is without power and road access, and Gov. Jack Dalrymple signed a mandatory evacuation order for residents there Saturday. Though it was separated from the river by bottom land before the flood, the river has heavily eroded the land there.

"They were probably a quarter of a mile away from the river when this started," said Todd Sando, engineer with the state Water Commission. "We're worried about several other properties down there."

Lapp-Harris said that it was difficult say how many other structures were in danger of being washed away by the current because of the lack of access to the area and the intense velocity of the river.

"We're not sure what's been happening down there. This river's all over the place," she said. "Long-term, we're not sure what will happen."

Sando used the term "scour holes" to describe areas where the river's velocity has severely eroded the riverbed. Staff with the commission have been taking readings of the river bottom and have found spots between 90 and 100 feet deep near the Sibley Bend area and 60 to 84 feet deep at Hoge Island, near where a house was washed off its foundation a week ago, according to Bruce Engelhardt, a commission engineer conducting the surveys.

"We're definitely finding a lot of erosion and a lot of scour holes," he said.

The commission has a graphic showing the riverbed profile on its website.

Engelhardt said that the commission was not trying identify areas where erosion was a greater threat because the river is changing so fast.

"We haven't tried to put together a list because the river is so dynamic," he said. "You just assume that anything along riverbanks is a danger area."

Heavy erosion is usually a concern at bends in the river, Sando said.

"Wherever there's an outside bend of the river, wherever there's scour forming ... there's risk," he said.

Commission workers also have been measuring the surface elevations of the river to form a better idea of how high river levels will be as the U.S. Army Corps of Engineers lowers outflows from Garrison Dam. The capacity of the river may increase or decrease as sediment is scoured from the riverbed or sediment from upstream is deposited here.

"When they drop flows back down ... it may be different than what it was coming up," Engelhardt said. "It could go either way."

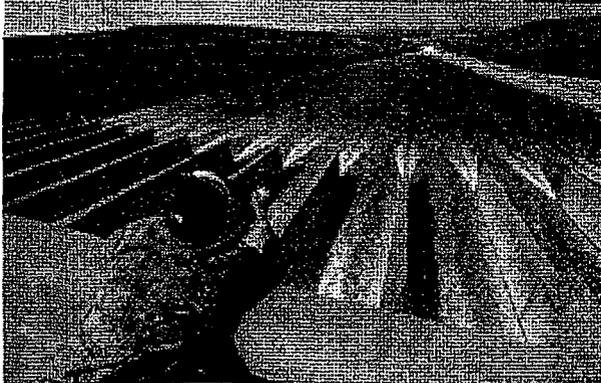
(Reach reporter Christopher Bjorke at 250-8261 or chris.bjorke@bismarcktribune.com.)



BILLINGS GAZETTE

FORT PECK DAM

Gushing spillway is Fort Peck's newest tourist attraction



JUNE 11, 2011 12:00 AM • BY BRETT FRENCH OF THE GAZETTE STAFF

FORT PECK — Lane Gobbs drove 40 miles out of his way on Wednesday to see the historic releases from Fort Peck's spillway, a stream of 37,000 cubic feet per second of water exploding into a roaring, frothy boil of white water at the base.

"That's pretty impressive," Gobbs said while standing on the concrete bridge over the top of the spillway. "I heard it was only a once-in-a-lifetime deal, so ..."

Exceeding the previous record release of 35,000 cfs set in 1975, the spillway's gush of water from Fort Peck Reservoir has become the largest tourist attraction in a soaking wet northeastern Montana that is weary of water and its problems.

People can't help but stop to look, take photographs and shoot video. Some hold puppies or babies.

The releases keep going higher as the spillway's manager, the Army Corps of Engineers, tries to keep up with record-setting runoff.

On Friday, the dam was releasing 60,000 cfs total — 13,000 cfs through the dam's power-generating turbines, the other 47,000 cfs down the spillway.

"The dam and everything is designed for this, but it's never been done," said John Daggett, dam operations manager for the Corps. "I mean, we're crashing old records. If you weren't nervous about it you'd be abnormal."

Daggett has great respect for the designers of the structures, most of which were built during the 1930s.

"We're testing their design, that's for sure," he said.

The spillway has been referred to by some as the "world's largest bowling alley." The concrete sluice was completed in 1938 after about 1,500 men worked for several years moving 14 million cubic yards of dirt and rock. That was replaced with about 27,000 tons of steel and 560,000 cubic yards of concrete that stretches about a mile while dropping 215 feet. At the top, the spillway measures 820 feet wide, narrowing to 120 feet at the bottom.

Water is released through 16 gates, each one measuring 40 feet by 25 feet and weighing 80 tons. Huge chains are used to lift the gates. If raised all the way, 250,000 cfs of water — about 2 million gallons per second — would flow down the spillway at about 65 mph.

Even without reaching such a tremendous flow, the churning water at the base of the spillway is mesmerizing as an eddy on each side circles back to collide with the spillway's descending water. Waves crash 30 feet high, sometimes splashing higher, in a plume that resembles a constantly changing head of liquid cauliflower. Beyond the first massive wave, other rollers twist and collide before finally calming a quarter-mile beyond in a hissing, bubbling froth.

Above it all, a steady mist hangs in the air and the water continually roars and spits as the surfacing fountains of water sprout and collapse. It is an awe-inspiring and frightening display of power. The sight is enough to make any whitewater rafter or kayaker wonder how the water would eat and spit out a boat.

As the water circles rapidly below the spillway, colliding with the coal banks of the surrounding canyon, slides of black dirt and boulders calve off into the eddies, a sign of how unstable the soils have become with record-setting moisture.

As forecasts call for more rain, Daggett and his crew of fellow workers can only respond by raising releases.

"I'm a firm believer that at the end of the day Mother Nature is in charge," he said. "She controls things and we have to react to it."

By the numbers

Fort Peck Dam is the second-largest dam in the United States and the eighth-largest in the world.

The earthen dam was built in the 1930s by pumping a mud slurry from below into forms. The slurry was then allowed to dry.

The reservoir behind the dam is 134 miles long and boasts 1,520 miles of shoreline when the reservoir is at an elevation of 2,234 feet. Right now, the dam's elevation is more than 2,250 feet, its maximum pool. At its deepest, the reservoir is 220 feet deep.

The spillway is located three miles east of the dam and has been used four times — in 1975, 1976, 1979 and 1997.



TransCanada says Keystone XL will be safest pipeline in U.S.

AUGUST 16, 2011 5:15 PM • BY LORNA THACKERAY OF THE GAZETTE STAFF

TransCanada's proposed Keystone XL Pipeline will be the safest crude oil pipeline built in America, officials of the Calgary-based company told reporters Tuesday during a stop in Billings.

Visiting in the wake of a July 1 leak in ExxonMobil's Silvertip Pipeline that poured 1,200 barrels of oil into the Yellowstone River near Laurel, TransCanada officials were seeking to reassure Montanans about the safety of the much larger pipeline they hope to build across 284 miles of Eastern Montana in 2012 and 2013.

"We really do believe comparisons are entirely inappropriate," said Alex Pourbaix, president of TransCanada's energy and oil pipeline division.

Keystone XL, designed to carry heavy crude from Alberta tar sands to refineries on the Texas Gulf Coast, will cross the Milk, Missouri and Yellowstone rivers on its route through Montana. Hundreds of smaller creeks and seasonal streams also are in its path. Pipe will be buried 5 feet below the bed of those lesser waterways.

Engineer Les Cherwenuk, director of the Keystone XL project, explained that the company plans to use horizontal directional drilling to bore 25 feet under the three major rivers and install heavy-walled pipe at the crossings.

Valves that can shut down the pipeline at the first hint of a problem will be built on both sides of the crossing, he continued. Pressure in the pipeline will be "very significantly" lower at the crossings than at other points along the high-pressure line, Pourbaix said.

The project will be monitored electronically 24/7 and inspection flights are planned every two weeks, Cherwenuk said.

Before construction on the pipeline can proceed, TransCanada must obtain a presidential permit through the U.S. State Department. The State Department last year presented a draft environmental impact statement that was deemed inadequate by the EPA. A supplemental draft EIS was completed in April, which the EPA also found wanting. A final draft of the EIS is due by the end of the month.

Pourbaix said the State Department has acknowledged that the pipeline is necessary and that TransCanada has exceeded regulatory standards to ensure the safety of Keystone XL. He said he strongly doubts the State Department will change its views in the final draft. The company is looking for final approval by the end of the year. It is ready to begin construction within weeks of a permit being issued.

But the proposed \$7 billion project is not without critics, who protest that environmental consequences could be catastrophic. While the pipeline has generated some concern in Montana, it is most controversial in Nebraska, where opponents say the pipeline route would endanger the Ogallala Aquifer. The New York Times has even editorialized that the pipeline is unnecessary.

Robert Jones, vice president of TransCanada's Energy and Pipeline Division, countered that pipelines "are the safest and most environmentally conscious way of transporting crude oil. It's safer than trucks, rail or tankers."

He said there are already hundreds of thousands of pipelines moving oil safely every day.

"A very high degree of safety" has been engineered into the project, said Cherwenuk. The company has been subjected to "regulated standards that have never been required of any operation constructing a new liquid pipeline," he said.

The 36-inch pipeline will be built of specially constituted steel that is resistant to puncture. It will be coated inside and out with a corrosion-resistant shell. Three systems, including remote electronic monitoring, have been designed into the project, he said. The pipeline will be buried 4 feet deep, which is deeper than most existing pipeline.

There will be "minor" environmental disruption, company officials acknowledge. But they stressed that the disruptions are far outweighed by security and economic factors.

Cherwenuk said the pipeline will generate an estimated \$421 million in new spending in Montana during construction and development phases and 1,200 jobs.

Those jobs will go to a combination of in-state workers and experienced workers brought in from elsewhere, said Terry Cunha, a spokesman for TransCanada.

"We'll try to hire as many qualified local people as possible," he said.

It will also generate annual property taxes estimated at \$62 million as it passes through Phillips, Valley, McCone, Dawson, Prairie and Fallon counties.

A \$100 million on-ramp from the Bakken oil fields in North Dakota and Montana could open opportunities in both states, Pourbaix said. The on-ramp linking them to Keystone XL could carry 65,000 barrels of oil a day to market.

What the debate comes down to, Pourbaix said, is the issue of a secure oil supply for the nation. He said about 15 million barrels of oil are consumed each day in the United States and the country produces only 4 million or 5 million barrels. The rest is imported.

"It comes down to: where do you want to get your oil from?" he said.

Keystone XL could reduce U.S. dependence on oil from more volatile and less friendly areas in the Mideast and Venezuela by 40 percent, Pourbaix said.

Analysis of Frequency, Magnitude and Consequence of Worst-Case Spills From the Proposed Keystone XL Pipeline

John Stansbury, Ph.D., P.E.

Executive Summary

TransCanada is seeking U.S. regulatory approval to build the Keystone XL pipeline from Alberta, Canada to Texas. The pipeline will transport diluted bitumen (DilBit), a viscous, corrosive form of crude oil across Montana, South Dakota, Nebraska, Kansas, Oklahoma and Texas. As part of the regulatory process, TransCanada is required by the National Environmental Policy Act (NEPA) to evaluate the potential environmental impacts of a pipeline spill. The Clean Water Act (CWA) also requires TransCanada to estimate the potential worst-case discharge from a rupture of the pipeline and to pre-place adequate emergency equipment and personnel to respond to a worst-case discharge and any smaller spills. The Keystone XL environmental assessment documents (e.g., Draft Environmental Impact Assessment) as well as the environmental impacts documents for the previously built Keystone pipeline, can be found on the US State Department web site. It is widely recognized that the environmental assessment documents for the Keystone XL pipeline are inadequate, and that they do not properly evaluate the potential environmental impacts that may be caused by leaks from the pipeline (e.g., USEPA 2011a). The purpose of this paper is to present an independent assessment of the potential for leaks from the pipeline and the potential for environmental damage from those leaks.

The expected frequency of spills from the Keystone XL pipeline reported by TransCanada (DNV, 2006) was evaluated. According to TransCanada, significant spills (i.e., greater than 50 barrels (Bbls)) are expected to be very rare (0.00013 spills per year per mile, which would equate to 11 significant spills for the pipeline over a 50 year design life). However, TransCanada made several assumptions that are highly questionable in the calculation of these frequencies. The primary questionable assumptions are: (1) TransCanada ignored historical data that represents 23 percent of historical pipeline spills, and (2) TransCanada assumed that its pipeline would be constructed so well that it would have only half as many spills as the other pipelines in service (on top of the 23 percent missing data), even though they will operate the pipeline at higher temperatures and pressures and the crude oil that will be transported through the Keystone XL pipeline will be more corrosive than the conventional crude oil transported in existing pipelines. All of these factors tend to increase spill frequency; therefore, a more realistic assessment of expected frequency of significant spills is 0.00109 spills per year per mile (from the historical data (PHMSA, 2009)) resulting in 91 major spills over a 50 year design life of the pipeline.

The CWA requires that TransCanada estimate the "worst-case spill" from the proposed pipeline (ERP, 2009). TransCanada's calculation of the worst-case spill from the proposed Keystone XL pipeline was not available at the time of this assessment, so an assessment of the methods used by TransCanada for the existing Keystone pipeline and a comparison of the results of those methods with the methods recommended in this analysis were made. The worst-case spill volume at the Hardisty Pumping Station on the Keystone (the original pipeline will be referred to as simply the Keystone pipeline while the proposed pipeline is the Keystone XL pipeline) pipeline predicted using methods recommended in this analysis was 87,964 barrels (Bbl), while the worst-case spill predicted using TransCanada's methods was 41,504 Bbl (ERP, 2009). The difference is a factor of more than 2 times. The primary difference between the two methods was the expected time to shut down the pumps and valves on the pipeline.

TransCanada used 19 minutes (TransCanada states that it expects the time to be 11.5 minutes for the Keystone XL pipeline). Since a very similar pipeline recently experienced a spill (the Enbridge spill), and the time to finally shutdown the pipeline was approximately 12 hours, and during those 12 hours the pipeline pumps were operated for at least 2 hours, it is clear that the assumption of 19 minutes or 11.5 minutes is not appropriate for the shut-down time for the worst-case spill analysis. Therefore, worst-case spill volumes are likely to be significantly larger than those estimated by TransCanada. The worst-case spill volumes from the Keystone XL pipeline for the Missouri, Yellowstone, and Platte River crossings were estimated by this analysis to be 122,867 Bbl, 165,416 Bbl, and 140,950 Bbl, respectively. In addition, this analysis estimated the worst-case spill for a subsurface release to groundwater in the Sandhills region of Nebraska to be 189,000 Bbl (7.9 million gallons).

Among numerous toxic chemicals that would be released in a spill, the benzene (a human carcinogen) released from the worst-case spill into a major river (e.g., Missouri River) could contaminate enough water to form a plume that could extend more than 450 miles at concentrations exceeding the Safe Drinking Water Act Maximum Contaminant Level (MCL) (i.e., safe concentration for drinking water). Therefore, serious impacts to drinking water intakes along the river would occur. Contaminants from a release at the Missouri or Yellowstone River crossings would enter Lake Sakakawea in North Dakota where they would adversely affect drinking water intakes, aquatic wildlife, and recreation. Contaminants from a spill at the Platte River crossing would travel downstream unabated into the Missouri River for several hundred miles and affect drinking water intakes for hundreds of thousands of people in cities like Lincoln, NE; Omaha, NE; Nebraska City, NE; St. Joseph, MO; and Kansas City, MO, as well as aquatic habitats and recreational activities. In addition, other constituents from the spill would pose serious risks to aquatic species in the river. The Missouri, Yellowstone, and Platte Rivers all provide habitat for threatened and endangered species including the pallid sturgeon, the interior least tern, and the piping plover. A major spill in one of these rivers could pose a significant threat to these species.

The benzene released by the worst-case spill to groundwater in the Sandhills region of Nebraska would be sufficient to contaminate 4.9 billion gallons of water at concentrations exceeding the safe drinking water levels. This water could form a plume 40 ft thick by 500 ft wide by 15 miles long. This plume, and other contaminant plumes from the spill, would pose serious health risks to people using that groundwater for drinking water and irrigation.

Introduction

TransCanada is seeking U.S. regulatory approval to build the Keystone XL pipeline from Alberta, Canada to Texas. The pipeline will transport diluted bitumen (DilBit), a viscous, corrosive form of crude oil across Montana, South Dakota, Nebraska, Kansas, Oklahoma, and Texas. As part of the regulatory process, TransCanada is required by the National Environmental Policy Act (NEPA) to evaluate the potential environmental impacts of a pipeline spill. The Clean Water Act (CWA) also requires TransCanada to estimate the potential worst-case discharge from a rupture of the pipeline and to pre-place adequate emergency equipment and personnel to respond to a worst-case discharge and any smaller spills. The Keystone XL environmental assessment documents (e.g., Draft Environmental Impact Assessment) as well as the environmental impacts documents for the previously built Keystone pipeline, can be found on the US State Department web site. It is widely recognized that the environmental assessment documents for the Keystone XL pipeline are inadequate, and that they do not properly evaluate the potential environmental impacts that may be caused by leaks from the pipeline (e.g., USEPA, 2011a). The purpose of this paper is to present an independent assessment of the potential for leaks from the pipeline and the potential for environmental damage from those leaks.

Full report can be found at

<http://watercenter.unl.edu/downloads/2011-Worst-case-Keystone-spills-report.pdf>

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Michigan oil leak polluting Kalamazoo River; Governor declares disaster area

Michigan oil leak is not on the same scale as the BP oil spill in the Gulf of Mexico. But it is causing concern in southern Michigan.



A Canada goose covered in oil attempts to fly out of the Kalamazoo River in Marshall, Mich., July 27. Crews were working Tuesday to contain and clean up the Michigan oil leak from a ruptured pipeline that poured into a creek and flowed into the Kalamazoo River in southern Michigan, coating birds and fish. An estimated 877,000 gallons (3.3 million liters) of oil leaked from a pipeline into the river. (AP Photo/Kalamazoo Gazette, Jonathon Gruenke)

By Tim Martin, Associated Press
posted July 28, 2010 at 1:23 pm EDT

Battle Creek, Michigan

Southern Michigan residents are learning that devastating oil spills aren't limited to the Gulf Coast.

Crews were working Wednesday to contain and clean up an estimated 877,000 gallons of oil that coated birds and fish as it poured into a creek and flowed into the Kalamazoo River, one of the state's major waterways.

Michigan Gov. Jennifer Granholm toured the area by helicopter Tuesday night and said she wasn't satisfied with the response to the spill. The leak in the 30-inch

pipeline, which was built in 1969 and carries about 8 million gallons of oil daily from Griffith, Ind., to Sarnia, Ontario, was detected early Monday.

IN PICTURES: Destructive Oil Spills

"There needs to be a lot more done," Granholm said. "There are not enough resources on the river right now."

Granholm declared a state of disaster in Calhoun County and potentially affected areas along the river, which eventually bisects the city of Kalamazoo and meanders to Saugatuck, where it empties into Lake Michigan. Officials don't believe oil will spread past a dam upstream of Kalamazoo. The cause of the spill is under investigation.

Calgary, Alberta-based Enbridge Inc.'s affiliate Enbridge Energy Partners LP of Houston initially estimated that about 819,000 gallons of oil spilled into Talmadge Creek before the company stopped the flow.

But state officials were told during a company briefing Tuesday that an estimated 877,000 gallons spilled, said Mary Dettloff, spokeswoman for the Michigan Department of Natural Resources and Environment.

On Wednesday, U.S. Rep. Mark Schauer, D-Mich., said Enbridge was slow in alerting federal authorities of the spill.

Enbridge has said it was detected between 9:30 a.m. and 10 a.m. Monday. Schauer released documents saying the incident was not reported to the National Response Center until about 1:30 p.m. There were calls to area fire departments late Sunday complaining about the "bad smell of natural gas," the documents said.

A message seeking comment was left Wednesday morning with Enbridge, which had scheduled a news conference for later Wednesday morning.

As of late Tuesday, oil was reported in at least 16 miles of the Kalamazoo River downstream of the spill. Company officials said the spill appeared to be contained and oil wouldn't likely drift much more downstream.

Enbridge crews and contractors are using oil skimmers and absorbent booms to minimize its environmental impact.

"This is our responsibility," Enbridge's president and chief executive Patrick D. Daniel said Tuesday evening in Battle Creek. "This is our mess. We're going to clean it up."

Many area residents were surprised to learn that a pipeline was so close to the Great Lakes river.

"I just can't believe they allowed that to happen, and they're not equipped to handle

it," said Owen Smith, 53, of Galesburg. Smith lives near the river and stopped at several points far upstream on Tuesday to see what might be headed his way.

The air was pungent with the smell of oil, but health officials said they so far were satisfied with the results from air quality tests. Groundwater testing was expected to begin soon.

Still, health officials warned residents to stay away from the river, saying it should be closed to fishing and other recreational activities, and irrigation. No injuries or illnesses have been reported, but a few households near the spill had been evacuated.

Enbridge said it had about 200 employees and contractors working on the spill, and a center was being set up to help ducks, geese and other wildlife that were coated with oil.

Local, state and federal agencies also were involved, and the National Transportation Safety Board launched an investigation.

Schauer said Tuesday he discussed the spill with President Barack Obama. Schauer called the spill a "public health crisis," and said he plans to hold hearings to examine the response.

Obama has pledged a swift response to requests for assistance, White House spokesman Matt Leirich said.

The river already faced major pollution issues. An 80-mile segment of the river and five miles of a tributary, Portage Creek, were placed on the federal Superfund list of high-priority hazardous waste sites in 1990. The Kalamazoo site also includes four landfills and several defunct paper mills.

Related:

- China oil spill spreads but not as big as BP oil spill in Gulf
- Gulf oil spill: As gusher stops, response playbook is being rewritten
- 'Static kill' growing as option to end Gulf oil spill drama

IN PICTURES: Destructive Oil Spills

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Guest Opinion: Keystone pipeline: Gold mine or environmental disaster?

JUNE 27, 2009 12:00 AM • WESLEY P. JAMES

The governor wants the pipeline for the jobs, county commissioners want the pipeline for the property taxes and local businesses want the pipeline for the economic activity generated by the construction and operation of the pipeline.

The proposed 36-inch-diameter pipeline will operate at a pressure of 1,500 pounds per square inch or about twice the pressure of most crude-oil pipelines and about 25 times the pressure in a city water distribution system. A fire hose connected to a city water supply can spray water a distance of 200 feet while a break in the pipeline could, in theory, spray oil 5,000 feet. If a valve in the pipeline is closed too rapidly, a 300 psi pressure surge will be generated and the total pressure in the pipeline will be 1,800 psi.

Pipeline safety regulations require that the wall thickness be 0.748 inches. The Keystone pipeline proposed for Eastern Montana will have a wall thickness of 0.465 inches or about half that required by regulation. At a pressure of 1,800 psi and a wall thickness of 0.465 inches, stress in the pipeline will be 70,000 psi, which is equal to the yield stress of the steel, and the pipeline will probably rupture. The highest pressure in the pipeline will occur where the elevation is the lowest or at stream crossings.

Risking oil spills

Having a simple operational error causing a major oil spill is unacceptable. Pressure surges in long pipelines are common and are generally caused by valve movement, check valves, pump startup and power failure.

Pipeline safety regulations in both the U. S. and Canada require that the factor of safety (bursting stress divided by the operating stress) be not less than 2.0. So why is Keystone Pipeline proposing a safety factor of 1.2 for Montana?

Apparently, it is cheaper for Keystone to pay for oil spill cleanup than to build a safe pipeline and prevent oil spills. It's like a farmer buying car tires for his truck because they are cheaper. Operating at a pressure of 100 psi, he may be able to haul several loads on a smooth pavement, but in the long run you know that there will be trouble down the road. This is equally true of the pipeline. Over the 50-year life of the project, corrosion will reduce the wall thickness of the pipeline. Leaks and ruptures will become more frequent. If the pipe is made in China, there will also be quality control issues with the manufacturing.

Economic pressure

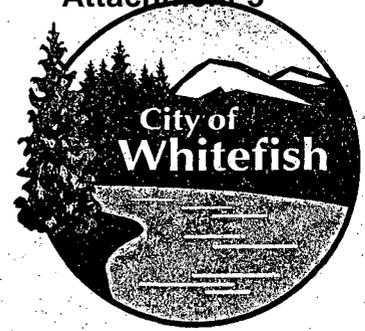
The original design using standard wall thickness pipe was economically feasible only when the price of crude oil was over \$100 per barrel. Now that the price of crude oil is under \$100 per barrel, the pipeline is apparently feasible only if Keystone Pipeline can use cheaper thin-walled

pipe. If Keystone Pipeline's request to use thin-walled pipe is approved by the U.S. Pipeline and Hazardous Materials Safety Administration, the company will end up with a gold mine and we will end up with an environmental disaster in our backyard.

This pipeline runs through our James family homestead east of Circle for a distance of two miles. I am concerned that it will be substandard and unsafe to live near. When I get all the data on the pipeline, I plan to develop an unsteady-state computer model of the pipeline to see where the pipeline will rupture. Why? Because this is the type of work that I have been doing for the last 40 years. Landowners should have this information before they sign an easement.

Wesley P. James of Bigfork is retired from a career teaching hydraulics at Texas A&M University.

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December 17, 2012

Honorable Governor Schweitzer
Helena State Capitol
1301 East Sixth Avenue
Helena, Montana 59601

Subject: City of Whitefish Support for Spencer Lake South Timber Sale and
Update on 2004 Whitefish Neighborhood Plan Periodic Assessment

Honorable Governor Schweitzer and Distinguished Land Board:

I am here before you this morning on behalf of the City of Whitefish and the Whitefish City Council to convey our overwhelming support for the Spencer Lake South Timber Sale and planned mitigations for the South and North sales. We believe the DNRC timber sales generate revenue for the trust beneficiaries while providing public recreation opportunities along the Spencer connector trail to other trail systems. Over the past several years, the DNRC has worked diligently and cooperatively with a rather diverse group of stakeholders, including the City of Whitefish, to develop a plan that balances the needs for forest product sales, fire hazard reduction, forest health, and recreation.

Also, at this time, the City of Whitefish wishes to acknowledge the time and commitment from the various participants who have made possible the continuing development of the Whitefish Trail and in meeting our targeted goals set out in the 2004 Whitefish Area Trust Lands Neighborhood Plan. The City will be forwarding a periodic update for 2012 to memorialize its fulfillment of the requirement for a periodic assessment on the progress of meeting the goals of the 2004 Neighborhood Plan. I am here today to inform you that only eight years after adoption of the Plan, the community, partners and the DNRC have exceeded the 10 year target goal. We have identified 3,137 acres in the various subareas which have a variety of projects initiated, nearing completion, and completed, including 22 miles of trail construction, trail heads, parking and other improvements. Because we have met and exceeded the 10 year target goal we believe the extended sequencing plan timetable has been triggered, as contemplated by the Plan. We also conclude that the various policies and implementation strategies identified within the Neighborhood Plan continue to be relevant in the execution of the Plan.

As State Land Board members you are well aware of these Whitefish Trail accomplishments made possible in part by your approval last month of the Certificate of Purchase for acquisition of the Public Recreation Easement and the Land Bank Sale to Two Bear Properties of Whitefish, providing a public recreation trail easement to the City.

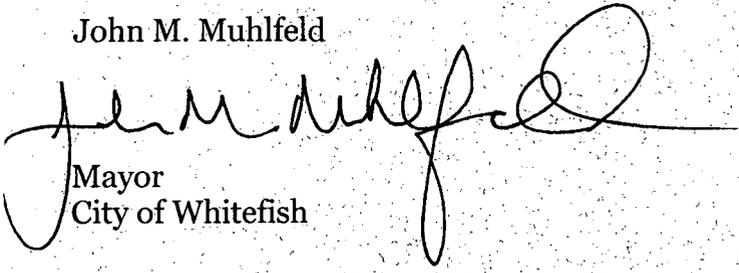
These accomplishments could only have been made through the efforts of everyone getting involved, including the members of this Board, your staff and legal departments, Governor Brian Schweitzer, the Department of Natural Resources and Conservation, and its Director, Mary Sexton, Shawn Thomas, Trust Lands Management Division Administrator, John Grimm, Real Estate Management Bureau Chief, legal staff, Melissa Hornbein, Mark Phares, and Sonya Germann, the Northwestern Land Office, Steve Frye, Area Manager, Greg Poncin, Kalispell Unit Manager, Brian Manning, Stillwater Unit Manager, the Whitefish Legacy Partners, Lin Akey, Board President, Diane Conradi, legal counsel, Heidi Van Everen, Director, City Councilors, and in particular Councilor John Anderson, Park and Recreation Director, Karl Cozad, City Attorney Mary VanBuskirk, and the Whitefish Community volunteers and supporters of the Whitefish Trail.

In closing, the City respectfully asks for your support and to memorialize our accomplishments as set forth in the Whitefish Area Trust Lands Neighborhood Plan. On behalf of the City of Whitefish, we thank you all for your substantial time and work to reach these goals. We look forward to a productive, long-lasting relationship working with you all and in particular with our partners in the DNRC Northwestern Land Office, in the implementation of our shared commitment to the Whitefish Trail and the school trust beneficiaries.

Governor Schweitzer, it has been an honor to work with you over the past several years. On behalf of the City of Whitefish and its residents, thank you for your leadership and vision. I wish you the best of luck in your future endeavors.

Respectfully submitted,

John M. Muhlfeld



Mayor
City of Whitefish