

BELLE FOURCHE PIPELINE COMPANY

Environmental Division

Bob Dundas, P.G., Environmental Coordinator
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Reply to:

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January 3, 2008

Patrick Fahn
Utility Analyst
North Dakota Public Service Commission
600 E. Boulevard
Bismarck ND 58505-0480



RE: Transmittal of Tree/Shrub Inventories

Dear Mr. Fahn:

Belle Fourche Pipeline Co. is transmitting as part of case number PU-07-596 8" Crude Oil Pipeline/McKenzie County Siting Application (i.e., Alexander 8" Loop), the tree and shrub inventory as prepared by Keitu Engineering.

Please call me at (307) 266-0411 should you require any additional information.

Sincerely,

Bob Dundas, P.G.
Environmental Coordinator

Attachments

File: BFPL Alex Loop

Tree Inventory Worksheet

Client: Belle Fourche Pipeline Company	Landowner: Federal	Section: See Notes
Date: 12-11-07	County: McKenzie	Township: See Notes
Data By: Heather Jandt	State: ND	Range: See Notes

Narrative Description of Stand and Landowners Objectives:		
Project: Alexander 8-inch Crude Oil Pipeline		
Starting Point: Bowline Junction = North Unit of the Little Missouri National Grasslands		

Tree No.	Species	Location	DBH ¹	Condition ²	Notes
1.	Green Ash <i>Fraxinus pennsylvanic</i>	47 35 15.57678 N 103 37 22.61336 W	5.4"	P F G	T147N R102W Section 1
		Approximately 3 miles NE of Bowline Junction			Spring Creek
2.	Green Ash <i>Fraxinus pennsylvanic</i>	47 35 15.50729 N 103 37 22.30355 W	3.8"	P F G	T147N R102W Section 1
		Approximately 3 miles NE of Bowline Junction			Spring Creek
3.	Green Ash <i>Fraxinus pennsylvanic</i>	47 35 15.49526 N 103 37 22.23631 W	3.2"	P F G	T147N R102W Section 1
		Approximately 3 miles NE of Bowline Junction			Spring Creek
4.	Green Ash <i>Fraxinus pennsylvanic</i>	47 35 14.08455 N 103 37 24.45677 W	13"	P F G	T147N R102W Section 1
		Approximately 3 miles NE of Bowline Junction			Spring Creek
5.	Green Ash <i>Fraxinus pennsylvanic</i>	47 35 14.33879 N 103 37 25.16285 W	7"	P F G	T147N R102W Section 1
		Approximately 3 miles NE of Bowline Junction			Spring Creek
6.	Green Ash <i>Fraxinus pennsylvanic</i>	47 35 15.02778 N 103 37 24.28658 W	39"	P F G	T147N R102W Section 1
		Approximately 3 miles NE of Bowline Junction			Spring Creek
Tree No.	Species	Location	DBH ¹	Condition ²	Notes
7.	Eastern Cottonwood <i>Populus deltoides</i>	47 36 20.36097 N 103 39 13.86032 W	6.4"	P F G Not Cleared But Damaged	T148N R102W Section 27
		Approximately 5.13 miles NW of Bowline Junction			Unnamed Tributary
8.	Eastern Cottonwood <i>Populus deltoides</i>	47 36 20.34491 N 103 39 13.66745 W	9.5"	P F G	T148N R102W Section 27
		Approximately 5.13 miles NW of Bowline Junction			Unnamed Tributary
9.	Eastern Cottonwood <i>Populus deltoides</i>	47 36 20.61038 N 103 39 13.34584 W	14"	P F G	T148N R102W Section 27
		Approximately 5.13 miles NW of Bowline Junction			Unnamed Tributary

Tree No.	Species	Location	DBH ¹	Condition ²	Notes
10.	American Elm <i>Ulmus americana</i>	47 36 52.16622 N 103 39 26.38484 W	5.4"	P F G	T148N R102W Section 27 Unnamed Tributary
		Approximately 5.77 miles NW of Bowline Junction			
11.	American Elm <i>Ulmus americana</i>	47 36 52.94983 N 103 39 27.29330 W	3.8"	P F G	T148N R102W Section 27 Unnamed Tributary
		Approximately 5.79 mile NW of Bowline Junction, 100 ft NW of Inventory 10.			
12.	Eastern Cottonwood <i>Populus deltoides</i>	47 37 02.30612 N 103 39 30.87705 W	16"	P F G	T148N R102W Section 27 Unnamed Tributary
		Approximately 0.18 miles NW of Inventory 10-11			
13.	American Elm <i>Ulmus americana</i>	47 37 02.32445 N 103 39 30.37094 W	4.5"	P F G	T148N R102W Section 27 Unnamed Tributary
		Approximately 0.18 miles NW of Inventory 10-11			
14.	American Elm <i>Ulmus americana</i>	47 37 17.43703 N 103 39 28.99515 W	22.3"	P F G	T148N R102W Section 22
		Approximately 0.3 miles N of Inventory 12-13			
15.	Green Ash <i>Fraxinus pennsylvanic</i>	47 42 57.70208 N 103 39 12.64392 W	14"	P F G	T149N R101W Section 19 Charbonneau Creek
		Approximately 0.32 miles SE of 21 st Street NW			
16.	Green Ash <i>Fraxinus pennsylvanic</i>	47 42 57.97260 N 103 39 12.22149 W	14.6"	P F G	T149N R101W Section 19 Charbonneau Creek
		Approximately 0.32 miles SE of 21 st Street NW			
17.	Green Ash <i>Fraxinus pennsylvanic</i>	47 42 58.47686 N 103 39 12.10033 W	9.5"	P F G	T149N R101W Section 19 Charbonneau Creek
		Approximately 0.32 miles SE of 21 st Street NW			
18.	Green Ash <i>Fraxinus pennsylvanic</i>	47 42 58.37135 N 103 39 12.34415 W	11.5"	P F G	T149N R101W Section 19 Charbonneau Creek
		Approximately 0.32 miles SE of 21 st Street NW			

Tree No.	Species	Location	DBH ¹	Condition ²	Notes
19.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 43 55.69945 N 103 39 21.12200 W	5"	P F G	T149N R101W Section 18
		Approximately 0.38 miles NE of 22 nd Street NW & Hwy 85			
20.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 43 55.73014 N 103 39 20.97747 W	7"	P F G	T149N R101W Section 18
		Approximately 0.38 miles NE of 22 nd Street NW & Hwy 85			
21.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 43 55.70201 N 103 39 20.89297 W	4.7"	P F G	T149N R101W Section 18
		Approximately 0.38 miles NE of 22 nd Street NW & Hwy 85			
22.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 43 55.73270 N 103 39 20.77658 W	7"	P F G	T149N R101W Section 18
		Approximately 0.38 miles NE of 22 nd Street NW & Hwy 85			
23.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 43 55.70912 N 103 39 20.68689 W	4.5"	P F G	T149N R101W Section 18
		Approximately 0.38 miles NE of 22 nd Street NW & Hwy 85			
24.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 43 55.74099 N 103 39 20.52672 W	10"	P F G	T149N R101W Section 18
		Approximately 0.38 miles NE of 22 nd Street NW & Hwy 85			
Tree No.	Species	Location	DBH ¹	Condition ²	Notes
25.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 04.72413 N 103 39 22.06102 W	4.7"	P F G	T149N R101W Section 7
		Approximately 0.42 miles NE of 22 nd Street NW & Hwy 85			
26.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 04.68136 N 103 39 21.98212 W	10.5"	P F G	T149N R101W Section 7
		Approximately 0.42 miles NE of 22 nd Street NW & Hwy 85			
27.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 04.69916 N 103 39 21.87119 W	10"	P F G	T149N R101W Section 7
		Approximately 0.42 miles NE of 22 nd Street NW & Hwy 85			
28.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 04.68384 N 103 39 21.78263 W	7"	P F G	T149N R101W Section 7
		Approximately 0.42 miles NE of 22 nd Street NW & Hwy 85			

29.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 04.65943 N 103 39 21.59199 W	7"	P F G	T149N R101W Section 7
		Approximately 0.42 miles NE of 22 nd Street NW & Hwy 85			
30.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 04.72677 N 103 39 21.41859 W	5.7"	P F G	T149N R101W Section 7 East
		Approximately 0.42 miles NE of 22 nd Street NW & Hwy 85			
31.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 04.72677 N 103 39 21.41859 W	4.7"	P F G	T149N R101W Section 7 West
		Approximately 0.42 miles NE of 22 nd Street NW & Hwy 85			
32.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 04.72992 N 103 39 21.30657 W	4.7"	P F G	T149N R101W Section 7
		Approximately 0.42 miles NE of 22 nd Street NW & Hwy 85			
Tree No.	Species	Location	DBH ¹	Condition ²	Notes
33.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 11.52545 N 103 39 17.32534 W	10.8"	P F G	T149N R101W Section 7
		Approximately 0.43 miles NE of 22 nd Street NW & Hwy 85			
34.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 11.53794 N 103 39 17.16060 W	7.6"	P F G	T149N R101W Section 7
		Approximately 0.43 miles NE of 22 nd Street NW & Hwy 85			
35.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 11.53471 N 103 39 16.93193 W	7.6"	P F G	T149N R101W Section 7
		Approximately 0.43 miles NE of 22 nd Street NW & Hwy 85			
36.	Dropmore Elm <i>Ulmus pumila</i> 'Dropmore'	47 44 11.52102 N 103 39 16.77299 W	6.3"	P F G	T149N R101W Section 7
		Approximately 0.43 miles NE of 22 nd Street NW & Hwy 85			
Tree No.	Species	Location	DBH ¹	Condition ²	Notes
37.	Eastern Cottonwood <i>Populus deltoides</i>	47 50 06.07641 N 103 39 36.40118 W	9.5"	P F G	T150N R101W Section 6
		Approximately 0.7 miles W of 29 th St. NW & Hwy 85, and 0.08 miles North			
TOTALS	Ash Count = 10 Cottonwood Count = 5 Elm Count = 22			Total = 37	
TOTAL x 2	Ash Total = 20 Cottonwood Total = 10 Elm Total = 44			Total = 74	

1. Diameter at breast height (DBH) is the diameter of a tree measured in inches at breast height (4.5 feet from the ground).
2. Condition – record the condition of each sampled tree as Good (G); Fair (F); or Poor (P). Good = reasonably straight, clear stem with no serious damage. Poor = badly misshapen, limby, short stemmed or seriously damaged. Poor trees are in a general state of decline but not dead. Fair = trees are in average condition and vigor for the area, but may in need of corrective work.

Shrub Inventory Worksheet

Client: Belle Fourche Pipeline Company	Landowner: Federal	Section: See Notes
Date: 12-11-07	County: McKenzie	Township: See Notes
Data By: Heather Jandt	State: ND	Range: See Notes

Narrative Description of Stand and Landowners Objectives:

Project: Alexander 8-inch Crude Oil Pipeline
 Starting Point: Bowline Junction = North Unit of the Little Missouri National Grasslands

Shrub No.	Species	Location	Quantity	Approximate Height (ft)	Notes
1.	Western Snowberry <i>Sumphoricarpus occidentalis</i>	47 35 15.57746 N 103 37 22.58389 W	604.42 ft ²	0 ft. to 3 ft.	T147N R102W Section 1 Spring Creek
		Approximately 3.3 miles NW of Bowline Junction			
2.	Chokecherry <i>Prunus virginiana</i>	47 35 14.41330 N 103 37 25.06162 W	2	5 ft. to 6 ft.	T147N R102W Section 1 Spring Creek
		Approximately 3.3 miles NW of Bowline Junction			
3.	Chokecherry <i>Prunus virginiana</i>	47 35 14.54358 N 103 37 24.82675 W	1	6.5 ft.	T147N R102W Section 1 Spring Creek
		Approximately 3.3 miles NW of Bowline Junction			
Shrub No.	Species	Location	Quantity	Approximate Height (ft)	Notes
4.	Silver Buffaloberry <i>Shepherdia argentea</i>	47 35 12.85974 N 103 37 28.12725 W	2	5 ft. to 6 ft.	T147N R102W Section 1 Spring Creek
		Approximately 3.3 miles NW of Bowline Junction			
Shrub No.	Species	Location	Quantity	Approximate Height (ft)	Notes
5.	Silver Buffaloberry <i>Shepherdia argentea</i>	47 35 13.93401 N 103 37 30.18624 W	3	0 ft. to 2 ft.	T147N R102W Section 1 Spring Creek
		Approximately 3.3 miles NW of Bowline Junction			
6.	Silver Buffaloberry <i>Shepherdia argentea</i>	47 35 13.93401 N 103 37 30.18624 W	3	3 ft. to 4 ft.	T147N R102W Section 1 Spring Creek
		Approximately 3.3 miles NW of Bowline Junction			
Shrub No.	Species	Location	Area/ Count	Approximate Height (ft)	Notes
7.	Chokecherry <i>Prunus virginiana</i>	47 36 19.93111 N 103 39 13.83437 W	3	0 ft. to 4 ft.	T148N R102W Section 27 Unnamed Tributary
		Approximately 2 miles NW of previous Spring Creek Crossing			
8.	Chokecherry <i>Prunus virginiana</i>	47 36 19.58984 N 103 39 13.82726 W	6	0 ft. to 4 ft.	T148N R102W Section 27 Unnamed Tributary
		Approximately 2 miles NW of previous Spring Creek Crossing			

9.	Chokecherry <i>Prunus virginiana</i>	47 36 19.58984 N 103 39 13.82726 W	9	5 ft. to 9 ft.	T148N R102W Section 27
		Approximately 2 miles NW of previous Spring Creek Crossing			Unnamed Tributary
10.	Chokecherry <i>Prunus virginiana</i>	47 36 19.72701 N 103 39 13.80207 W	15	0 ft. to 4 ft	T148N R102W Section 27
		Approximately 2 miles NW of previous Spring Creek Crossing			Unnamed Tributary
11.	Chokecherry <i>Prunus virginiana</i>	47 36 19.72701 N 103 39 13.80207 W	2	5 ft. to 9 ft.	T148N R102W Section 27
		Approximately 2 miles NW of previous Spring Creek Crossing			Unnamed Tributary
12.	Chokecherry <i>Prunus virginiana</i>	47 36 19.72701 N 103 39 13.80207 W	3	10 ft. to 15 ft.	T148N R102W Section 27
		Approximately 2 miles NW of previous Spring Creek Crossing			Unnamed Tributary
13.	Chokecherry <i>Prunus virginiana</i>	47 36 19.86323 N 103 39 13.75348 W	4	0 ft. to 4 ft	T148N R102W Section 27
		Approximately 2 miles NW of previous Spring Creek Crossing			Unnamed Tributary
Shrub No.	Species	Location	Area/ Count	Approximate Height (ft)	Notes
14.	Chokecherry <i>Prunus virginiana</i>	47 36 34.62138 N 103 39 16.61710 W	1	3 ft.	T148N R102W Section 27
		Approximately 0.3 miles N of previous inventory (7-13)			
Shrub No.	Species	Location	Area/ Count	Approximate Height (ft)	Notes
15.	Silver Buffaloberry <i>Shepherdia argentea</i>	47 36 50.15418 N 103 39 25.43464 W	5	0 ft. to 2 ft.	T148N R102W Section 27
		Approximately 0.3 miles NW of previous inventory (14)			
16.	Silver Buffaloberry <i>Shepherdia argentea</i>	47 36 50.06843 N 103 39 25.38430 W	1	5 ft.	T148N R102W Section 27
		Approximately 0.3 miles NW of previous inventory (14)			
17.	Western Snowberry <i>Sumphoricarpus occidentalis</i>	47 36 50.15418 N 103 39 25.43464 W	20	0 ft. to 3 ft.	T148N R102W Section 27
		Approximately 0.3 miles NW of previous inventory (14)			

Shrub No.	Species	Location	Area/ Count	Approximate Height (ft)	Notes
18.	Chokecherry <i>Prunus virginiana</i>	47 36 52.81383 N 103 39 27.13309 W	1	3.5 ft.	T148N R102W Section 27
		Approximately 0.05 miles NW of previous inventory (15-17)			Unnamed Tributary
19.	Western Snowberry <i>Sumphoricarpus occidentalis</i>	47 36 53.01898 N 103 39 27.36271 W	73.95 ft ²	0 ft. to 3 ft.	T148N R102W Section 27
		Approximately 0.05 miles NW of previous inventory (15-17)			Unnamed Tributary
Shrub No.	Species	Location	Area/ Count	Approximate Height (ft)	Notes
20.	Western Snowberry <i>Sumphoricarpus occidentalis</i>	47 37 02.22108 N 103 39 30.70271 W	75	0 ft. to 3 ft.	T148N R102W Section 27
		Approximately 0.18 miles N of previous inventory (18- 19)			Unnamed Tributary
Shrub No.	Species	Location	Area/ Count	Approximate Height (ft)	Notes
21.	Chokecherry <i>Prunus virginiana</i>	47 37 55.10982 N 103 39 26.16819 W	15	0 ft. to 4 ft	T148N R102W Section 22
		Approximately 0.7 miles N of previous inventory (20), 0.30 miles W of access road, 3 miles S of Hwy 68			
Shrub No.	Species	Location	Area/ Count	Approximate Height (ft)	Notes
22.	Chokecherry <i>Prunus virginiana</i>	47 42 57.60095 N 103 39 12.75609 W	8	5 ft. to 9 ft	T149N R101W Section 19
		Approximately 0.32 miles SE of 21 st Street NW			Charbonneau Creek
Shrub No.	Species	Location	Area/ Count	Approximate Height (ft)	Notes
23.	Chokecherry <i>Prunus virginiana</i>	47 55 04.49185 N 103 39 33.14955 W	609.96 ft ²	0 ft. to 15 ft	T151N R101W Section 7
		Approximately 0.52 miles W of 35 th St. NW & Hwy 85, and 0.2 miles S off of 35 th St. NW			Lowland Area
Shrub No.	Species	Location	Area/ Count	Approximate Height (ft)	Notes
24.	Western Snowberry <i>Sumphoricarpus occidentalis</i>	47 57 46.76062 N 103 39 45.50593 W	2,295.32 ft ²	0 ft. to 3 ft.	T152N R101W Section 30
		Approximately 0.18 miles W of 38 th St. NW & Hwy 85			
25.	Western Snowberry <i>Sumphoricarpus occidentalis</i>	47 57 46.29056 N 103 39 46.21200 W	3,592.91 ft ²	0 ft. to 3 ft.	T152N R101W Section 30
		Approximately 0.18 miles W of 38 th St. NW & Hwy 85			
TOTALS	Chokecherry Count = 70 Silver Buffaloberry Count = 14 Western Snowberry Count = 95 Total Count = 179 Chokecherry Total = 140 Silver Buffaloberry Total = 28 Western Snowberry Total = 190 Total Count x 2 = 358				
AREA TOTALS	Chokecherry Area = 609.96 ft ² Western Snowberry Area = 6,566.60 ft ² Total Square Feet = 7,176.56 ft ²				