



**PLAINS**  
**ALL AMERICAN**  
**PIPELINE, L.P.**



September 27, 2017

Mr. Darrell Nitschke  
North Dakota Public Service Commission  
600 E. Boulevard, Dept. 408  
Bismark, ND 58505

RE: ND PSC Case No. PU-12-40 – Nelson Takeoff to Ross Pipeline  
Submittal of Final Tree and Shrub Survival Report – Fall 2017

Dear Mr. Nitschke,

Enclosed you will find our third and final tree and shrub survival report associated with the Nelson Takeoff to Ross Pipeline in Mountrail County, ND. Replanting occurred in the fall of 2014 and the spring of 2015. We are supplying our September 2017 findings in the attached report.

We understand that Mr. Patrick Fahn had been the individual assigned to this particular project in the past. If you could please pass this along to him, or the individual currently assigned to this project, I would certainly appreciate it. If there are any questions regarding this report, you can reach me at 713-993-5096 or via email at [cehoward@paalp.com](mailto:cehoward@paalp.com).

Regards,

Carol E. Howard  
Environmental Permitting & Compliance Specialist

**159 PU-12-40** Filed: 9/29/2017 Pages: 7  
**Final Tree and Shrub Survival Report**

Plains Pipeline, L.P.

Carol Howard

**Tree and Shrub Survival Report**

**Nelson Takeoff to Ross Pipeline Project  
Mountrail County, North Dakota**



Prepared by  
**Plains All American Pipeline, L.P.**  
333 Clay Street, Suite 1600  
Houston, Texas 77002

**ND PSC Case Number: PU-12-40**

**September 27, 2017**

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# 1 Introduction

## 1.1 Background

Plains All American Pipeline, L.P. (Plains) completed construction of the Nelson to Ross Pipeline (NRP) in 2015. The NRP is a new 16.89-mile, 10.75-inch outside-diameter crude oil pipeline that originates from a piping connection near Stanley, North Dakota and terminates at Plains' Ross Rail Terminal near Ross, North Dakota. The Project is located entirely within Mountrail County, North Dakota. Its construction required the removal of trees and shrubs within the Project right-of-way. The Project is under the jurisdiction of the North Dakota Public Service Commission (ND PSC).

A Tree/Shrub Replacement Plan was submitted in November 2014 which discussed the approach that Plains took and the ND PSC approved to mitigate tree and shrub removal. The plan was approved in December 2014 and implemented in the fall of 2014 and spring of 2015. This survival report documents the number of trees and shrubs surviving through the summer of 2017. This is the third and final report associated with the required 3 years of survival monitoring.

# 2 Survival Survey

## 2.1 Survival Requirements

Many of the trees and shrubs identified during the pre-construction inventory were avoided, due to the several bores and neck downs along the pipeline route. Approximately 16 trees and shrubs were removed during construction; therefore, the total number to be replaced was a minimum of 32 trees based on the 2:1 replacement requirement. Survival requirements will be based on the 32 required replacements.

At the end of 3 years of monitoring (2017), 75% of the trees, or 24, are required to have survived to meet the obligations set by the ND PSC.

## 2.2 Planting

Three landowners within the Project area had trees impacted during construction. Trees were replanted at five different locations on the subsequent owner's properties. In total, 32 trees were replanted which fulfilled the 2:1 mitigation requirement (Appendix A).

## 2.3 Annual Precipitation

According to National Weather Service preliminary climatological data for Williston, North Dakota (approximately 60 miles west of the project area), 15.08 inches of precipitation was recorded from September 1, 2016 through August 31, 2017 (Table 1). This amount is 0.71 inches above average for this time period largely due to the fact that the months of September 2016 and August 2017 were well above average. This suggests that weather conditions were slightly dry for tree growth during the majority of the months in this review period.

Table 1: Monthly Recorded Rainfall at National Weather Service Station in Williston, ND

Month	Recorded Precipitation (inches)	Normal Precipitation (inches)	Difference (inches)
September-16	3.54	1.06	2.48
Oct-16	1.06	0.92	0.14
November-16	0.24	0.65	-0.41
Dec-16	0.96	0.62	0.34
January-17	0.44	0.59	-0.15
Feb-17	0.70	0.39	0.31
March-17	0.85	0.71	0.14
Apr-17	0.50	1.00	-0.50
May-17	0.98	1.92	-0.94
Jun-17	1.29	2.52	-1.23
July-17	0.79	2.54	-1.75
Aug-17	3.73	1.45	2.28
<b>Total</b>	<b>15.08</b>	<b>14.37</b>	<b>0.71</b>

**2.4 Fall 2017 Survey Results**

The plantings for each landowner were revisited in September 2017. Replanted trees were in generally good condition. Trees or shrubs which had any portion of living plant material were considered alive. Deciduous trees that had lost their foliage were considered alive if they appeared healthy and had stems that did not break easily when bending. Of the 32 trees that were replanted in the fall of 2014 and spring of 2015, 30 were alive during the September survey (Appendix A). The current survival rate is above the required 75% (24 trees) at 93.75%.

## **Appendix A**

### **Tree Mitigation Plan**

**Plains All-American Pipeline, LLC Nelson Takeoff to Ross Pipeline Tree Mitigation Plan  
Case No. PU-12-40**

Landowner	Location (Station #)	Species Removed	Number Removed	Species Replanted	Number Replanted	Location Replanted	1st Year Survival	2nd Year Survival	3rd Year Survival
Thompson/Milford & Springer - Thompson/June	306+00	American elm ( <i>Ulmus americana</i> )	4	Ponderosa pine ( <i>Pinus ponderosa</i> )	8	Removal site	8	8	8
Thompson/Milford & Springer - Thompson/June	312+00	American elm	6	Ponderosa pine	12	Removal site	10	10	10
Thompson/Milford & Springer - Thompson/June	319+00	American elm	1	Ponderosa pine	2	Removal site	2	2	2
Trulson/Curtis & Leslie	496+00	Downy hawthorne ( <i>Crateagus mollis</i> )	4	Ponderosa pine	8	Removal site	8	8	8
Nelson Hubbard Properties LLLP & Carolle Grisham Trust	161+50	Unknown	1	Ponderosa pine	2	Removal site	2	2	2
Total			16	Total	32				