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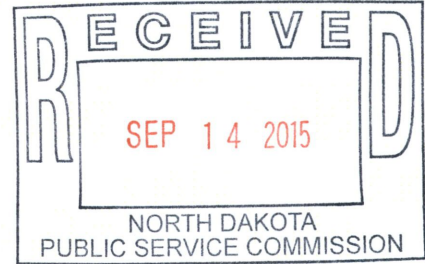
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September 14, 2015

VIA FEDERAL EXPRESS

Mr. Darrell Nitschke
Executive Director
North Dakota Public Service Commission
600 E. Boulevard Avenue, Dept. 408
Bismarck, ND 58505-0480



In Re: Enbridge Pipelines (Southern Lights) L.L.C.
LSr Pipeline
Docket No. PU-07-075

Dear Mr. Nitschke:

On behalf of Enbridge Pipelines (Southern Lights) L.L.C., we hereby submit the original and eleven (11) copies of Enbridge Pipelines and North Dakota Parks & Recreation Revegetation Project – Graham Island State Park and Grahams Island Tree and Shrub Planting Project: Status Report 2014, regarding the LSr pipeline.

Please contact the undersigned should you have any questions. Thank you,

Very truly yours,

A handwritten signature in black ink that reads 'Sally Joyce'.

SALLY JOYCE

SJ:ca
Enclosures

cc: Mr. Pat Fahn
North Dakota Public Service Commission
600 E. Boulevard Avenue, Dept. 408
Bismarck, ND 58505-0480

100 PU-07-75 Filed: 9/14/2015 Pages: 19
2014 tree and shrub planting project status report

Enbridge Pipelines (Southern Lights) L.L.C.

Sally Joyce

ENBRIDGE ENERGY & ND PARKS & RECREATION

REVEGETATION PROJECT – GRAHAMS ISLAND STATE PARK

Grahams Island Tree and Shrub Planting Project: Status Report 2014

2014 Re-Plants

Re-plants for 2014 planting season were ordered in October of 2013. A total of 425 deciduous and coniferous tree and shrubs were ordered through Lincoln-Oakes Nurseries, Bismarck, North Dakota. In addition, 45 deciduous and coniferous tree and shrubs were ordered through Ramsey County Soil Conservation District in November of 2013. These trees were planted in 2014 at the site that was not planted in 2013 due to rains and **campground construction**.

QUANTITY	PRODUCT DESCRIPTION	SIZE
<i>Deciduous - Bareroot</i>		
25	Chokecherry, Schubert	2-3'
25	Cottonwood, Native	5'+
25	Cottonwood, Silver	2-3'
100	Cottonwood, Siouxland	4-5'
25	Indigo, False	3'+
50	Maple, Silver	2-3'
25	Poplar, Hybrid	4-5'
75	Poplar, Prairie Sky	2-3'
25	Sumac, Staghorn	2-3'
<i>Conifers - Container</i>		
15	Spruce, Black Hills	1 gallon
35	Spruce, Black Hills	2 gallon

Table 1 Lincoln Oakes Tree and Shrub Order 2014

Quantity	Description	Size
5	Eastern Red Cedar	2'
10	Black Hills Spruce	2'
10	Boxelder	2'
10	Hackberry	2'
10	Bur Oak	2'

Table 2. Ramsey County Soil Conservation District Tree Order 2014

An agreement was entered into between Ramsey County Soil Conversation District and Grahams Island State Park to plant
 1 the 45 trees and install fabric.

Vegetation Control

During the months of May and June the tree and shrubs were planted by ND Parks and Recreation Department staff and Ramsey County Soil Conservation District staff. Vegetation control within the sites has been a challenge. During the months of June-August, spot treatment of hard-to-kill perennial weeds has been required. Park staff have utilized hand sprayers with GlyStar® a non-selective herbicide with glyphosate as the active ingredient (rate-3 oz./gallon). Roundup herbicide was also applied at the base of trees and shrubs in site 3. Approximately 92 hours have been dedicated to vegetation control with all 7 sites being spot sprayed at least once this year.



Photo 1. Site 3

Tree Grow Tubes

SunFlex™ Grow Tubes were purchased this spring to help trees survive the first couple years of growth. SunFlex™ grow tube system have been designed to help trees grow taller, straighter, and bigger. The tree shelters also help protect the trees from animal's damage.

Tree and Shrub Monitoring Survival

Monitoring survival of tree and shrubs was completed in September of 2014. Results of monitoring recorded in this report. Percent survival ranged from 85.92% (Site 7 planted 2014) to 100% (Site 6). Average survival rate for the 14 sites is 94.99%.

Deer Damage Management

Deer browsing on the newly planted trees and shrubs continues to be a problem. Methods for deterrents utilized this year include enclosing the sites with heavy duty deer fence, and spraying sites with deer repellent. In response to deer being observed eating the new growth on the trees and shrubs, staff applied Deerbusters® repellent to the some sites at the end of July. October of this year deer fencing was installed and park staff continued to apply deer repellent to unfenced sites. Last year only Site 2 and Site 4b were fenced.



Photo 2. Sign

Outreach

Three signs were posted near planting sites to help the general public become aware of the Enbridge Mitigation partnership project.

Tree and Shrub Species List

Common Name	Scientific Name
Ash, Green	<i>Fraxinus pennsylvanica</i>
Boxelder	<i>Acer negundo</i>
Buffaloberry	<i>Shepherdia argentea</i>
Cherry, Pin	<i>Prunus pennsylvanica</i>
Chokecherry, Common	<i>Prunus virginiana</i>
Chokecherry, Shubert	<i>Prunus virginiana</i> "schubert'
Hackberry	<i>Celtis occidentalis</i>
Hawthorne, Downy	<i>Crataegus mollis</i>
Indigo, False	<i>Amorpha fruticosa</i>
Maple, Amur	<i>Acer ginnala</i>
Maple, Silver	<i>Acer saccharinum</i>
Nannyberry	<i>Viburnum lentago</i>
Oak, Bur	<i>Quercus macrocarpa</i>
Pine, Ponderosa	<i>Pinus ponderosa</i>
Plum, American	<i>Prunus americana</i>
Rocky Mt Juniper	<i>Juniperus scopulorum</i>
Rose, Woods	<i>Rosa woodsii</i>
Spruce, Blackhills	<i>Picea glauca</i>
Sumac	<i>Rhus sp.</i>
Wolfberry (Silverberry)	<i>Elaeagnus commutata</i>



SITE 1a

Insect, Disease, Signs of Stress:

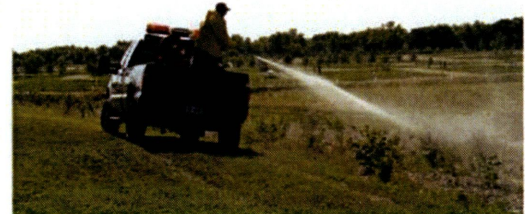
No signs of insect damage or disease.

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site was treated with deer repellent to protect planting from deer damage. Tubes were placed on over 100 trees in this site. Site is seeing natural regeneration of green ash and silverberry and Buffaloberry volunteers.

Survival Rate:

Site 1a	Tree/Shrub	
	Field Count Dead 2014	7 6
	Dead Trees	2 4
	Dead Shrubs	5 2
	% Dead Tree	2.62%
	% Dead Shrubs	5.67%
	Total % Dead	8.29%
	Total % Survival	91.71%



SITE 1b

Insect, Disease, Signs of Stress:

Limited signs of insect damage or disease, including web worms on a few chokecherry and some browning of needles on ponderosa pines.

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site was treated with deer repellent to protect planting from deer damage. Site is seeing natural regeneration of green ash and silverberry and buffaloberry volunteers.

Survival Rate:

Site 1b	Tree/Shrub	
	Field Count Dead 2014	56
	Dead Trees	20
	Dead Shrubs	36
	% Dead Tree	1.94%
	% Dead Shrubs	3.49%
	Total % Dead	5.43%
	Total % Survival	94.57%

SITE 1C

Insect, Disease, Signs of Stress:

**No signs of insect damage or disease.
Some browning of ponderosa pines.**

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site was treated with deer repellent to protect planting from deer damage.

Survival Rate:

Site 1c	Tree/Shrub	
	Field Count Dead 2014	81
	Dead Trees	11
	Dead Shrubs	70
	% Dead Tree	.39%
	% Dead Shrubs	2.49%
	Total % Dead	2.88%
	Total % Survival	97.12%

SITE 2a

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site is fenced to protect planting from deer damage. Site is seeing natural regeneration of green ash and silverberry and Buffaloberry volunteers.

Survival Rate:

Site 2a	Tree/Shrub	
	Field Count Dead 2014	32
	Dead Trees	15
	Dead Shrubs	17
	% Dead Tree	3.48%
	% Dead Shrubs	3.94%
	Total % Dead	7.42%
	Total % Survival	92.58%

SITE 2b

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site is fenced to protect planting from deer damage. Site is seeing natural regeneration of green ash and silverberry and Buffaloberry volunteers.

Survival Rate:

Site 2b	Tree/Shrub	
	Field Count Dead 2014	18
	Dead Trees	11
	Dead Shrubs	7
	% Dead Tree	2%
	% Dead Shrubs	1.27%
	Total % Dead	3.27%
	Total % Survival	96.73%

SITE 2C

Insect, Disease, Signs of Stress:

No signs of insect damage or disease. Ponderosa pines still showing signs of stress.

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site is fenced to protect planting from deer damage. Site is seeing natural regeneration of green ash and silverberry and Buffaloberry volunteers.

Survival Rate:

Site 2c	Tree/Shrub	
	Field Count Dead 2014	11
	Dead Trees	4
	Dead Shrubs	7
	% Dead Tree	.68%
	% Dead Shrubs	1.19%
	Total % Dead	1.87%
	Total % Survival	98.13%

SITE 2d

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site is fenced to protect planting from deer damage. Site is seeing natural regeneration of green ash and silverberry and Buffaloberry volunteers.

Survival Rate:

Site 2d	Tree/Shrub	
	Field Count Dead 2014	15
	Dead Trees	6
	Dead Shrubs	9
	% Dead Tree	1.21%
	% Dead Shrubs	1.81%
	Total % Dead	3.02%
	Total % Survival	96.98%

SITE 2e

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site is fenced to protect planting from deer damage. Site is seeing natural regeneration of green ash and silverberry and Buffaloberry volunteers.

Survival Rate:

Site 2e	Tree/Shrub	
	Field Count Dead 2014	37
	Dead Trees	16
	Dead Shrubs	21
	% Dead Tree	3.7%
	% Dead Shrubs	4.85%
	Total % Dead	8.55%
	Total % Survival	91.45%

SITE 3

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Site is planted with all trees. All trees are individually mulched and most deciduous trees have tree tubes.

Survival Rate:

Site3	Tree/Shrub	
	Field Count Dead 2014	2
	Dead Trees	2
	Dead Shrubs	0
	% Dead Tree	2.17%
	% Dead Shrubs	0%
	Total % Dead	2.17%
	Total % Survival	97.83%



SITE 4a

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site is fenced to protect planting from deer damage.

Survival Rate:

Site 4a	Tree/Shrub	
	Field Count Dead 2014	150
	Dead Trees	48
	Dead Shrubs	102
	% Dead Tree	1.17%
	% Dead Shrubs	2.48%
	Total % Dead	3.65%
	Total % Survival	96.35%



SITE 4b

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Site has been sprayed several times to control weeds. Weedy species were also hand pulled. Site is fenced to protect planting from deer damage.

Survival Rate:

Site 4b	Tree/Shrub	
	Field Count Dead 2014	4 2
	Dead Trees	1 1
	Dead Shrubs	3 1
	% Dead Tree	.7%
	% Dead Shrubs	1.97%
	Total % Dead	2.67%
	Total % Survival	97.33%

Site 5

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Fabric installed on this site. Dead stock and site gaps were replanted in 2014. Site was treated with deer repellent to protect planting from deer damage.

Site 5	Tree/Shrub	
	Field Count Dead 2014	19
	Dead Trees	1
	Dead Shrubs	18
	% Dead Tree	.36%
	% Dead Shrubs	6.79%
	Total % Dead	2.67%
	Total % Survival	93.21%

Site 6

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Fabric installed on this site. Site was treated with deer repellent to protect planting from deer damage

Site 6	Tree/Shrub	
	Field Count Dead 2014	0
	Dead Trees	0
	Dead Shrubs	0
	% Dead Tree	0%
	% Dead Shrubs	0%
	Total % Dead	0%
	Total % Survival	100%

Site 7

Insect, Disease, Signs of Stress:

No signs of insect damage or disease.

Management Comments:

Fabric installed on this site. Site was treated with deer repellent to protect planting from deer damage. Tree tubes were installed on some trees.

Site 7	Tree/Shrub	
	Field Count Dead 2014	20
	Dead Trees	5
	Dead Shrubs	15
	% Dead Tree	3.52%
	% Dead Shrubs	10.56%
	Total % Dead	14.08%
	Total % Survival	85.92%

Post Planting – Third Year Action Plan

1. Plant replacement stock – 355 trees and shrubs.
2. Continue to monitor trees health and vigor. Inspect for disease and insect problems.
3. Inspect evergreen trees for winter injury and fruit trees for rodent damage.
4. Remove tree tube if necessary.
5. Add more mulch if needed.
6. Replace dead trees as needed.
7. Water as needed.
8. Hire part-time seasonal biological technician to maintain plantings