

02/27/2019

Enbridge – Sandpiper Tree and Shrub Mitigation Plan Addendum

This addendum serves to finalize the remaining details for the Sandpiper Tree and Shrub Mitigation Plan. The addendum covers the following information: location, quantity, planting technique and schedule.

Location

The tree and shrub mitigation planting will be approximately ½ mile south of Hwy 2 off the east side of 296th St NW, west of Berthold, ND (refer to Attachment 1). The site is adjacent to the Enbridge Berthold Tank Farm on Enbridge property. The planting will be added on the north and west sides of an existing windbreak (refer to Attachment 2 for the planned layout).

Quantity

The table below shows the number of each species impacted and the planned planting ratios. Though a 2:1 mitigation ratio is required, Enbridge is planning higher replacement ratios to ensure success. A 4:1 replacement is planned for trees and a 3:1 replacement is planned for the shrubs of same or similar species. Two- to four-year-old saplings will be used for tree replacement and either bare root seedlings or vegetative deciduous cuttings are planned for the shrub replacement, according to NRCS recommendations¹.

Species		Growth Form	Expected Mature Width (ft) ²	Impact Count	Mitigation Ratio	Total Replacement
Scientific Name	Common Name					
<i>Fraxinus pennsylvanica</i>	Green ash	Tree	30-40	1	4	4
<i>Prunus virginiana</i>	Chokecherry	Shrub	10-20	7	3	21
<i>Rosa arkansana</i>	Prairie rose	Shrub	4-6	14	3	42
<i>Symphoricarpos occidentalis</i>	Snowberry	Shrub	1-2	23	3	69
Totals				45		136

Planting Technique

As shown in the Attachment 2, the trees/shrubs would be planted in a line parallel to an existing windbreak of trees. The spacing between plants would be 30' on center for the green ash trees, 15' on center for the chokecherry, and 5' on center for the rose and snowberry. Prior to planting, existing grass cover would be mown and the site would be prepared for planting. Weed barrier fabric would be installed as the trees/shrubs are installed. A watering regime will be implemented once to twice per week, depending on rain events, for the first month, tapering down to once per week the second month. The trees will be monitored to ensure growth has continued once planted.

Schedule

Planting is scheduled between mid-May 2019 through late-June 2019, according to weather and soil conditions. This is to ensure all frost is out of the ground, ground temperature is at or above 50°F, and the risk of a hard freeze is minimized.

¹ USDA-NRCS North Dakota. 2011. Tree Care and Management, Plant Stock Requirements. Field Office Technical Guide, Section 1, Windbreaks and Woodland.

² NDSU. 2017. Quick reference guide to tree and shrub characteristics. North Dakota Tree Information Center, North Dakota Tree Handbook. North Dakota State University - ND Forest Service. <https://www.ag.ndsu.edu/trees/documents/tree-handbook-table-2-1>.

Tree Planting Location

Write a description for your map.

Legend
Parcel Location



Google Earth

© 2018 Google

4th St NW



2000 ft



Proposed Tree Line

Sandpiper Tree Mitigation Plan Location

Legend

-  Parcel Location
-  Tree Line Planting Location

Approx. Start Location
48°19'22.52"N
101°44'41.05"W

Start with 4 ash trees from the north heading south followed by the shrubs. Center to center dimensions detailed in addendum planting technique section.

Access Road for planting and water mitigation after planting. Utilize current path present to minimize impact.

Approx. Corner Location
48°19'16.24"N
101°44'41.06"W

Approx. End Location
48°19'14.05"N
101°44'48.49"W

Approx. Corner Location
48°19'14.16"N
101°44'43.70"W

Google Earth

© 2018 Google

Approx. 260 feet

Approx. 640 feet

Approx. 560 feet

500 ft

