



September 22, 2014

Mr. Darrell Nitschke
North Dakota Public Service Commission
600 E. Blvd. Dept. 408
Bismarck, ND 58505-0480



SUBJECT: Tree and Shrub Survival Report, 3 of 3 for Six Projects

Dear Mr. Nitschke,

On behalf of NextEra Energy Resources, Inc., Tetra Tech is pleased to provide the third of three annual tree and shrub survival reports for the following six projects:

- Ashtabula (Case No. PU-08-32)
- Ashtabula II (Case No. PU-09-221)
- Ashtabula III (Case No. PU-10-147)
- Baldwin (Case No. PU-09-668)
- Langdon (Case No. PU-07-26)
- Oliver II (Case No. PU-06-312)

All six projects have met the 75% survival requirement. Please add these reports to the respective case files. An electronic copy of the six reports was submitted to ndpsc@nd.gov.

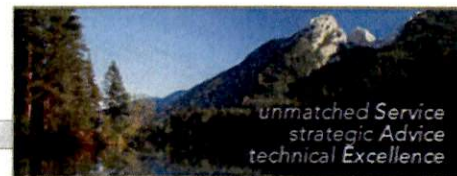
Please feel free to contact me at (512) 338-2855 or Anne-Marie.Griger@TetraTech.com if you have any questions.

Sincerely,

TETRA TECH, INC.

Anne-Marie Griger, AICP
Deputy Project Manager/Environmental Planner

112	PU-10-147	Filed: 9/22/2014	Pages: 22
	Tree and shrub survival report		
132	PU-09-668	Filed: 9/22/2014	Pages: 22
	Tree and shrub survival report		
37	PU-09-221	Filed: 9/22/2014	Pages: 22
	Tree and shrub survival report		
329	PU-08-32	Filed: 9/22/2014	Pages: 22
	Tree and shrub survival report		
184	PU-07-26	Filed: 9/22/2014	Pages: 22
	Tree and shrub survival report		
100	PU-06-312	Filed: 9/22/2014	Pages: 22
	Tree and shrub survival report		



Tree & Shrub Survival Report

Ashtabula I Wind Energy Center

Annual Report 3 of 3

Prepared for:

NEXTERA ENERGY RESOURCES

ASHTABULA WIND, LLC

ND PSC Case Number: PU-08-32 (Wind Farm)

ND PSC Case Number: PU-08-73 (Transmission Line)

Prepared by:

WENCK ASSOCIATES, INC.

301 1st Street NE, Suite 202

Mandan, ND 58554

(701) 751-3370

On Behalf of:

TETRA TECH, INC.

160 Federal Street, 3rd Floor

Boston, MA 02110

(617) 443-7500

1.0

Introduction & Background

The Ashtabula Wind Energy Center (Project) was completed in 2008 in Barnes County, North Dakota, within portions of Township 143N, Range 57W, Township 142N, Range 58W, Township 142N, Range 57W, and Township 141N, Range 57W. The Project is operated by Ashtabula Wind, LLC (Ashtabula Wind), a subsidiary of NextEra Energy Resources, LLC, and comprises a 148.5-megawatt (MW) wind generation plant and 230 kV transmission line approximately 9.5 miles long. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC). Its construction required the removal of trees and shrubs within Project rights-of-way.

A Tree and Shrub Replacement Plan for this Project was submitted in 2011 which discussed the approach that Ashtabula Wind would follow and the PSC approved the plan April 2011. The plan was implemented in May and June 2011. This survival report documents the number of trees and shrubs surviving in the summer of 2014. This is the third and final year of three years of survival monitoring.

Ashtabula Wind retained Tetra Tech, Inc. (Tetra Tech) and Wenck Associates, Inc. (Wenck) to assist in field checks and documentation of tree and shrub survival.

2.0 Survival Report

2.1 SURVIVAL REQUIREMENTS

The total number of trees and shrubs removed for the Project in 2008 was 292; the total number to be replaced was 584 based on the 2:1 replacement requirement. Due to circumstances beyond their control, Ashtabula will be responsible for tracking the survival of only 566 trees/shrubs (see Section 2.2). At the end of three years of monitoring (2014), 75% of these planted trees, or 425, will be required to have survived to meet the obligations of the PSC. An additional six trees will be required to have survived between this Project and the Ashtabula II Project, for a total of 431, since the landowners for the Ashtabula II Project did not want all of their allotted tree replacements.

2.2 PLANTING REVIEW

Five landowners within the Project area requested replacement on their property. One planting (Mark Askerooth allotment) was installed in May 2010 but had high tree/shrub mortality. Replacements for the Askerooth planting and the remaining landowner's plantings were installed in late May and early June 2011 in Sections 8, 9, 10, and 27, Township 142N, Range 57W and Section 14, Township 143N, Range 57W by the Barnes County SCD. A total of 944 trees were planted, which exceeds the required 2:1 ratio.

Ashtabula Wind can no longer be responsible for the allotment of trees for John Molstad. There was lack of cooperation from the landowner regarding planting of the trees in a timely manner; therefore his 18 allotted trees will not count towards the number required for the project (for further details, refer to Tree and Shrub Planting Report, November 2011).

The landowner Maynard Flatt stated that in 2013, the SCD replanted 100 trees to replace high mortality after a washout from a rainstorm in the spring of 2012.

2.3 2014 SURVIVAL

The plantings of each of the landowners were visited in July 2014. Trees or shrubs which had any portion of living plant material were considered alive. Of the 944 trees originally planted for this Project and including the replacement planting for Mr. Flatt, 494 were alive in the summer of 2014 (Table 2-1). Since the number of trees planted for the mitigation exceeded the planting requirement, the current survival rate is above the required 75% at 87%.

Table 2-1: Survival Counts

Landowner	Number of Trees/ Shrubs Planted	2012 Count	2013 Count	2014 Count	Comments
Mark Askerooth	449	190 deciduous 230 coniferous	407	286 (105 deciduous, 181 coniferous)	Weeds were well controlled and trees looked good in 2013. On the 2014 visit, several rows of trees were covered in weeds.
Casey Burchill	64	64	64	64	A large farmyard planting was installed (~1000 trees), but Ashtabula Wind was only responsible for the cost and survival of 64 trees.
Joel Owen	48	42	37	33	During field visits, it appeared only 44 trees were planted.*
Jon Owen	25	15	14	14	During field visits, it appeared only 15 trees were planted.*
Maynard Flatt	358	155	222	97	During 2012 field visit, it appeared only 259 trees were planted.* Landowner stated SCD replanted 100 new trees in 2013. During the 2014 visit, it appeared that one row of trees had been mowed and part of several rows had been cleared to create a field approach.
TOTAL	944	696	744	494	This count exceeds the required 431.

*The reason for the inconsistency with number of trees planted could include: a miscount of planted trees; SCD may not have planted as many as reported; Wenck staff may not have been able to locate the entire planting which is often split up into different parts of the farmyard; and/or some of the planted trees/shrubs may have disintegrated after dying. Currently, Ashtabula Wind will assume the number of trees reportedly planted in 2011 is the correct number and will use this number when calculating survival rate.



Tree & Shrub Survival Report

Ashtabula II Wind Energy Center

Annual Report 3 of 3

Prepared for:

NEXTERA ENERGY RESOURCES

ASHTABULA WIND II, LLC

ND PSC Case Numbers: PU-08-34 and PU-09-221 (Wind Farm)

Prepared by:

WENCK ASSOCIATES, INC.

301 1st Street NE, Suite 202

Mandan, ND 58554

(701) 751-3370

On Behalf of:

TETRA TECH, INC.

160 Federal Street, 3rd Floor

Boston, MA 02110

(617) 443-7500

The Ashtabula II Wind Energy Center (Project) was completed in 2009 in Griggs and Steele Counties, North Dakota, within portions of Township 144N, Range 58W and 57W and Township 145N, Range 57W. The Project is operated by Ashtabula Wind II, LLC (Ashtabula II), a subsidiary of NextEra Energy Resources, LLC, and comprises a 120-megawatt (MW) wind generation plant. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC). Its construction required the removal of trees and shrubs within Project rights-of-way.

A Tree and Shrub Replacement Plan for this Project, which discussed the approach that Ashtabula II would follow, was submitted in June 2010 and the PSC approved the plan that same month. The plan was implemented in May 2011. This survival report documents the number of trees and shrubs surviving in the summer of 2014. This is the third and final year of three years of survival monitoring.

Ashtabula II retained Tetra Tech, Inc. (Tetra Tech) and Wenck Associates, Inc. (Wenck) to assist in field checks and documentation of tree and shrub survival.

2.0 Survival Report

2.1 SURVIVAL REQUIREMENTS

The total number of trees and shrubs removed for the Project in 2009 was four; the total number to be replaced was eight based on the 2:1 replacement requirement. At the end of three years of monitoring (2014), 75% (six total) of the trees planted for this Project will be required to have survived to meet the obligations of the PSC. However, only one landowner requested replacement and the amount requested was only two trees. The six remaining replacement trees have been accounted for in the Ashtabula I Project area for landowners requesting more than the required replacement amounts. They will be tracked under the Ashtabula I Project and the Ashtabula I Tree and Shrub Replacement Plan.

2.2 PLANTING REVIEW

One landowner within the Project area requested replacement trees on his property. The planting was installed May 2011 in Section 14, Township 144N, Range 58W by the Griggs County SCD. A total of two trees were planted.

2.3 2014 SURVIVAL

The planting was visited in July 2014. Trees or shrubs that had any portion of living plant material were considered alive. Of the two trees originally planted for this project, both were alive in the summer of 2014 (Table 2-1). Since the number of trees alive meets the requirement, the current survival rate is above the required 75% at 100%.

Table 2-1: Survival Counts

Landowner	Number of Trees/Shrubs Planted	2012 Count	2013 Count	2014 Count	Comments
Ira Fuglestad	2	2	2	2	Planting appeared to be in good condition though the land is no longer owned by Ira Fuglestad.
TOTAL	2	2	2	2	This count meets the required 2.



Tree & Shrub Survival Report

Ashtabula III Wind Energy Center

Annual Report 3 of 3

Prepared for:

NEXTERA ENERGY RESOURCES

ASHTABULA WIND III, LLC

ND PSC Case Number: PU-10-147 (Wind Farm)

Prepared by:

WENCK ASSOCIATES, INC.

301 1st Street NE, Suite 202

Mandan, ND 58554

(701) 751-3370

On Behalf of:

TETRA TECH, INC.

160 Federal Street, 3rd Floor

Boston, MA 02110

(617) 443-7500

The Ashtabula III Wind Energy Center (Project) was completed in 2010 in Barnes County, North Dakota, within portions of Township 143N, Range 57W, Township 143N, Range 56W, Township 142N, Range 58W, Township 142N, Range 57W, and Township 141N, Range 58W. The Project is operated by Ashtabula Wind III, LLC (Ashtabula III), a subsidiary of NextEra Energy Resources, LLC, and comprises a 69-megawatt (MW) wind generation plant. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC) (Case No. PU-10-147). Its construction required the removal of trees and shrubs within Project rights-of-way.

A Tree and Shrub Replacement Plan for this Project, which discussed the approach that Ashtabula III would follow, was submitted in 2011 and the PSC approved the plan April 2011. The plan was implemented in May and June 2011. This survival report documents the number of trees and shrubs surviving in summer 2014. This is the third and final of three years of survival monitoring.

Ashtabula III retained Tetra Tech, Inc. (Tetra Tech) and Wenck Associates, Inc. (Wenck) to assist in field checks and documentation of tree and shrub survival.

2.0 Survival Report

2.1 SURVIVAL REQUIREMENTS

The total number of trees and shrubs removed for the Project in 2010 was 28; the total number to be replaced is 56 based on the 2:1 replacement requirement. Due to circumstances beyond their control (as discussed below), Ashtabula III will be responsible for tracking the survival of only 34 trees/shrubs (see Section 2.2). At the end of three years of monitoring (2014), 75% of these planted trees, or 26, will be required to have survived to meet the obligations of the PSC.

2.2 PLANTING REVIEW

Three landowners within the Project area requested replacement on their property. The plantings were installed in late May and early June 2011 in Section 17, Township 143N, Range 57W and Section 27, Township 142N, Range 58W by the Barnes County SCD. A total of approximately 57 trees were planted, however only 34 will continue to be tracked for survival.

Ashtabula III will not be responsible for further replacement of the portion of the allotment for Dawn Ihry given to a neighbor and the portion planted within a slough (see Tree and Shrub Planting Report, November 2011, for details). The 8 trees planted properly within the yard will continue to be tracked. Ms. Ihry has since sold the property where the trees were planted. Attempts to contact the current landowners have been unsuccessful to date.

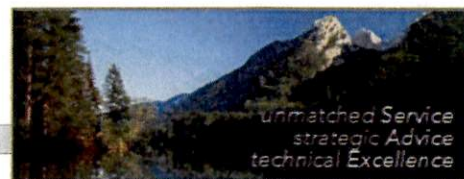
For the Mark Svenningsen planting, the SCD stated 6 trees were hand-planted in the yard. However, during field visits in 2012 and 2013, the landowner stated only 3 trees were received and planted. Two maple trees in tree tubes were planted in the yard and, according to the landowner, one maple tree was planted at his lake cabin. Ashtabula III has assumed the other 3 trees have been lost or died.

2.3 2014 SURVIVAL

The plantings of each of the landowners were visited in July 2014. Trees or shrubs which had any portion of living plant material were considered alive. Of the 34 trees being tracked for this Project, 27 were alive in the summer of 2014 (Table 2-1). The current survival rate is above the required 75% at 79%.

Table 2-1: Survival Counts

Landowner	Number of Trees/Shrubs Planted	2012 Count	2013 Count	2014 Count	Comments
Rodd & Deborah Svenningsen	20	15	20	19	Landowners were not available at the time of the field visit. Over 20 young trees were located in the yard, but it was difficult to determine which had been a part of the 2011 planting since they were not in one location. Poplar appeared to be volunteering on west side of the home. Additional trees were found that were not found during the 2012 field visit.
Mark & Jody Svenningsen	6	3	2	2	Spoke with Mr. Svenningsen during site visit and he stated only two trees were surviving. Both were observed and alive in tree tubes in the SW and S portion of the yard.
Dawn Ihry	~31 (only 8 will be tracked)	7	7	6	Due to the landowner giving away 10 trees, and planting another approximately 13 trees and shrubs in a slough, Ashtabula III will only be responsible for the survival of 8 of the trees. During the field visit, 6 live trees were located.
TOTAL	34	25	29	27	This count exceeds the required 26.



Tree & Shrub Survival Report

*Baldwin Wind Energy Center
Annual Report 3 of 3*

Prepared for:

**NEXTERA ENERGY RESOURCES
BALDWIN WIND, LLC**

ND PSC Case Number: PU-09-668 (Wind Farm)

Prepared by:

WENCK ASSOCIATES, INC.

301 1st Street NE, Suite 202
Mandan, ND 58554
(701) 751-3370

On Behalf of:

TETRA TECH, INC.

160 Federal Street, 3rd Floor
Boston, MA 02110
(617) 443-7500

The Baldwin Wind Energy Center (Project) was completed in 2010 in Burleigh County, North Dakota, within portions of Township 143N, Range 79W, Township 142N, Range 80W, and Township 142N, Range 79W. The Project is operated by Baldwin Wind, LLC (Baldwin Wind), a subsidiary of NextEra Energy Resources, LLC, and comprises a 102-megawatt (MW) wind generation plant. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC). Its construction required the removal of trees and shrubs within Project rights-of-way.

A Tree and Shrub Replacement Plan for this Project, which discussed the approach that Baldwin Wind would follow, was submitted to the PSC and approved by the agency in July 2011. The plan was implemented in June 2011 prior to the PSC's approval in order to ensure that the trees were planted early enough in the season. This survival report documents the number of trees and shrubs surviving in the summer of 2014. This is the third and final year of three years of survival monitoring.

Baldwin Wind retained Tetra Tech, Inc. (Tetra Tech) and Wenck Associates, Inc. (Wenck) to assist in field checks and documentation of tree and shrub survival.

2.0 Survival Report

2.1 SURVIVAL REQUIREMENTS

The total number of trees and shrubs removed for the Project in 2010 was 206; the total number to be replaced was 412 based on the 2:1 replacement requirement. At the end of three years, 75% of these planted trees, or 309, will be required to have survived to meet the obligations of the PSC.

2.2 PLANTING REVIEW

Six landowners within the Project area requested replacement on their property. The plantings for all landowners were installed early June 2011 in Sections 17 and 32, Township 143N, Range 79W and Sections 18, 22, 28, and 32, Township 142N, Range 79W by Prairie View Landscaping and Nursery. A total of 533 trees were planted, which exceeds the required 2:1 ratio.

A replacement planting was installed in July 2013 by Prairie View Landscaping and Nursery at the John Spitzer residence of 40 additional trees: 10 cottonwoods and 30 willows.

A replacement planting was installed in May 2014 by Plant Perfect at the Gene Hilken residence of 30 Colorado blue spruce.

2.3 2014 SURVIVAL

The plantings of each of the landowners were visited in July 2014. Trees or shrubs which had any portion of living plant material were considered alive. Of the 533 trees originally planted for this Project and the 70 from additional plantings, 361 were alive in the summer of 2014 (Table 2-1). The current survival rate is above the required 75% at 88%.

Table 2-1: Survival Counts

Landowner	Number of Trees/Shrubs Planted	2012 Count	2013 Count	2014 Count	Comments
John Spitzer	108	54	36 (32 spruce, 4 deciduous)	65 (32 spruce, 33 deciduous)	The larger-sized spruce continue to do well with no loss from 2013 to 2014. The new cottonwood and willow saplings did well overall in the new area that they were planted to the northeast of the farmyard.
Jeffrey & Robyn Spitzer	50	6	48 (43 willows, 5 cottonwoods/ poplars)	37 (36 willows, 1 cottonwood)	Reason for high mortality in 2012 not clear. After 2012 field visit, Prairie View replanted trees (50 willows and 20 poplars). In 2013, mainly willows were alive at base with few leaves, but they did not show vigorous growth or health. In 2014 trees showed growth and appeared healthy.
Robert Anderson	200	184	180	98	The area of the planting is now covered in 3 ft of grass making it difficult to locate the trees which could account for the dramatic decrease in numbers reported.
Gene & Vivian Hilken	75*	63	29	87 (77 spruce, 4 juniper, 6 cedar)	*Only 58 trees had been planted in 2011, not the reported 75. The count of 63 in 2012 had included some trees that were not part of the wind farm planting. High mortality of spruce on margin of low, wet area. Replacement planting took place in May 2014 which accounts for the marked increase.
Nathan Speten	50	49	48	47	Planting was in excellent condition.
Theodore Adamyk	50**	32	30	27 (22 pine, 5 oak)	**During 2013 visit, could only locate 46 trees in original planting. During the 2014 visit the planting was covered in 3 ft of grass which made locating the trees difficult.
TOTAL	533	388	371	361	This count exceeds the required 309.



Tree & Shrub Survival Report

Langdon Wind Energy Center

Annual Report 3 of 3

Prepared for:

NEXTERA ENERGY RESOURCES

LANGDON WIND, LLC

ND PSC Case Number: PU-07-26 (Wind Farm)

Prepared by:

WENCK ASSOCIATES, INC.

301 1st Street NE, Suite 202

Mandan, ND 58554

(701) 751-3370

On Behalf of:

TETRA TECH, INC.

160 Federal Street, 3rd Floor

Boston, MA 02110

(617) 443-7500

The Langdon I Wind Energy Center (Project) was completed in 2007 in Cavalier County, North Dakota, within portions of Township 161N, Range 59W, Township 160N, Range 59W, Township 160N, Range 60W, Township 159N, Range 59W, and Township 159N, Range 60W. The Project is operated by Langdon Wind, LLC (Langdon Wind), a subsidiary of NextEra Energy Resources, LLC, and comprises a 118.5-megawatt (MW) wind generation plant. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC). Its construction required the removal of trees and shrubs within Project rights-of-way.

A Tree and Shrub Replacement Plan for this Project, which discussed the approach that Langdon Wind would follow, was submitted in 2011 and the PSC approved the plan in April 2011. The plan was implemented in May 2011. This survival report documents the number of trees and shrubs surviving in the summer of 2014. This is the third and final year of three years of survival monitoring.

Langdon Wind retained Tetra Tech, Inc. (Tetra Tech) and Wenck Associates, Inc. (Wenck) to assist in field checks and documentation of tree and shrub survival.

2.0 Survival Report

2.1 SURVIVAL REQUIREMENTS

The total number of trees and shrubs removed for the Project in 2007 was 24; the total number to be replaced is 48 based on the 2:1 replacement requirement. At the end of three years, 75% of these planted trees, or 36, will be required to have survived to meet the obligations of the PSC.

2.2 PLANTING REVIEW

One landowner within the Project area requested replacement on their property. The planting was installed in May 2011 in Section 12, Township 160N, Range 61W by the Cavalier County SCD. A total of 99 trees were planted, which exceeds the required 2:1 ratio.

2.3 2014 SURVIVAL

The planting was visited in July 2014. Trees or shrubs which had any portion of living plant material were considered alive. Of the 99 trees and shrubs originally planted for this Project, 90 were alive in the summer of 2014 (Table 2-1). Since the number of trees planted for the mitigation exceeded the planting requirement, the current survival rate is above the required 75% at 188%.

Table 2-1: Survival Counts

Landowner	Number of Trees/Shrubs Planted	2012 Count	2013 Count	2014 Count	Comments
Roger Waslaski	99	98	91	90 (66 Lilacs, 24 Pines)	Number of trees required for replacement was 48. In 2014 the planting was in excellent condition.
TOTAL	99	98	91	90	This count exceeds the required 36.



Tree & Shrub Survival Report

Oliver II Wind Project Transmission Line

Annual Report 3 of 3

Prepared for:

NEXTERA ENERGY RESOURCES

OLIVER COUNTY WIND, LLC

ND PSC Case Number: PU-06-312 (Transmission Line)

Prepared by:

WENCK ASSOCIATES, INC.

301 1st Street NE, Suite 202

Mandan, ND 58554

(701) 751-3370

On Behalf of:

TETRA TECH, INC.

160 Federal Street, 3rd Floor

Boston, MA 02110

(617) 443-7500

In 2007, Oliver County Wind, LLC (Oliver Wind), a subsidiary of NextEra Energy Resources, LLC, constructed a 542-foot long, 230 kV electric transmission line and associated substation facility in Section 33 of Township 142N, Range 83W in Oliver County, North Dakota. The transmission line was built to connect the Oliver II Wind Energy Center to the existing Square Butte Electric Cooperative Center Substation, owned by Minnkota Power Cooperative, Inc. (Minnkota). Its construction required the removal of trees and shrubs within Project rights-of-way. At the time of permitting and construction of the Project, there were no length thresholds for jurisdiction of transmission lines, so this Project is considered to be under the jurisdiction of the PSC (Case No. PU-06-312).

A Tree and Shrub Replacement Plan for this Project, which discussed the approach that Oliver Wind would follow, was submitted in 2011 and the PSC approved the plan April 2011. The plan was implemented in June 2011. This survival report documents the number of trees and shrubs surviving in the summer of 2014. This is the third and final year of three years of survival monitoring.

Oliver Wind retained Tetra Tech, Inc. (Tetra Tech) and Wenck Associates, Inc. (Wenck) to assist in field checks and documentation of tree and shrub survival.

2.0 Survival Report

2.1 SURVIVAL REQUIREMENTS

The total number of trees and shrubs removed for the Project in 2007 was 103; the total number to be replaced is 206 based on the 2:1 replacement requirement. At the end of three years, 75% of these planted trees, or 155, will be required to have survived to meet the obligations of the PSC.

2.2 PLANTING REVIEW

Minnkota requested tree replacement on their property. The plantings were installed in early June 2011 by the Oliver County SCD in the SW¼ of Section 32, Township 142N, Range 83W on the upland along Nelson Lake. A total of 224 trees were planted.

Within a month after the trees were planted, a heavy rainstorm washed out a large portion of the planting. An interim survival count in fall 2011 concluded 92 trees remained, which was below the required 75% survival rate.

A second planting was installed in May 2012 of 99 additional trees: 8 Black Hills Spruce, 8 Blue Spruce, 20 Siberian Crabapple, 21 Midwest Crabapple, 21 Plum, and 21 Apricot.

2.3 2014 SURVIVAL

The planting was visited in June 2014. Trees or shrubs which had any portion of living plant material were considered alive. Of the 323 trees planted for this Project, including both 2011 and 2012 plantings, 159 were alive in June 2014 (Table 2-1). The current survival rate is above the required 75% at 77%.

Table 2-1: Survival Counts

Landowner	Number of Trees/Shrubs Planted	2012 Count	2013 Count	2014 Count	Comments
Minnkota Power Cooperative, Inc.	224 original in 2011 99 additional in 2012	186	178	159	Survival counts based on combined 2011 surviving trees/shrubs and 2012 replacement planting which totalled 323 trees/shrubs.
TOTAL	323	186	178	159	This count exceeds the required 155.