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October 15, 2019

Mr. Victor Schock
North Dakota Public Service Commission
600 E Boulevard Ave Dept. 408
Bismarck, ND 58505

VIA: United Postal Service

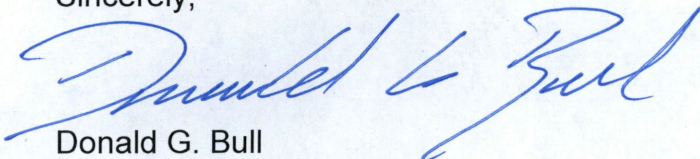
**RE: Hess Corporation Hawkeye Pipeline Tree and Shrub
2019 Replacement Completion and Survival Rate Report**

Dear Mr. Schock:

Attached for your review is the Hawkeye Pipeline Tree and Shrub 2019 Replacement Completion and Survival Rate Report. This report describes the 2019 survival rate for the plantings that took place in the Fall of 2018 and the final 2019 tree and shrub plantings that occurred the week of May 20, 2019. This completes the replanting 2:1 mitigation ratio requirements established by the Public Service Commission. Hess will submit two more survival rate inventory reports in the Fall 2020 and 2021.

If you should have any questions or comments concerning this report, please contact the undersigned at (713) 496-5759.

Sincerely,



Donald G. Bull

cc: Ms. Vicky Sund, Hess Corporation
Mr. Dale Weathersby, Hess Corporation
Mr. Brian Epperson, Hess Corporation

81 PU-15-32 Filed 10/15/2019 Pages: 22
Tree and Shrub 2019 Replacement Completion and Survival Rate Report
Hess North Dakota Pipelines LLC
Donald Bull

85 PU-15-31 Filed 10/15/2019 Pages: 22
Tree and Shrub 2019 Replacement Completion and Survival Rate Report
Hess North Dakota Pipelines LLC
Donald Bull

HAWKEYE PIPELINE TREE AND SHRUB 2019 REPLACEMENT COMPLETION AND SURVIVAL RATE REPORT

Planting Execution: May 20-23, 2019

Report Issuance: October 15, 2019 (Final)

Issued By: D. Bull (Advisor EHS-Environmental & Regulatory)

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HAWKEYE PIPELINE TREE AND SHRUB 2019 REPLACEMENT COMPLETION AND SURVIVAL RATE REPORT

1.0 INTRODUCTION

Hess North Dakota Pipelines LLC (Hess) has completed construction of an approximately 26-mile- long pipeline system connecting Bakken production fields south of Lake Sakakawea to existing processing facilities north of the lake. The Hawkeye Pipeline System Project (Project) will transport crude oil from the proposed Hawkeye Oil Facility near Keene, North Dakota, and natural gas and natural gas liquids (NGL) from the existing Hawkeye Compressor Station near Charison, North Dakota, to the existing Ramberg Truck Facility (crude oil) and the existing Silurian Compressor Station (natural gas and NGL) near Tioga, North Dakota.

Per the North Dakota Public Service Commission (PSC) Tree and Shrub Mitigation Specifications requirements identified in the PSC's Findings of Facts, Conclusions of Law and Order for the Project (Case Nos. PU-15-31 and PU-15-32), trees and shrubs shall be inventoried for replacement, replaced at a 2:1 ratio, and monitored for 3 years to determine if a 75 percent survival rate has occurred. Hess will submit annual reports to the PSC following each year's monitoring efforts. Hess understands the PSC may order additional plantings if the survival rate, after 3 years, is less than 75 percent.

2.0 FALL 2018 REPLACEMENT PROCESS AND SURVIVAL RATE

On October 16, 2018, the trees and shrubs were replaced by LOWE'S Garden Center of Minot, North Dakota using the same or similar species on a 2:1 basis pursuant to the PSC Tree and Shrub Mitigation Specifications. The required tree and shrub replacements that are not to be planted on Hess Hawkeye Pipeline affected properties, from which they were removed, were planted on a separate property owned by Hess. Trees were replaced using 2-year-old saplings and shrubs with stem cuttings. Based on the 2:1 mitigation ratio, planting of at least 10,992 trees and shrubs was required. The nursery provided a surplus of 158 chokecherry trees; therefore, increasing the total tree and shrub planting amount to 11,150. Most of the trees/shrubs were installed in two distinct areas at the Hess Tioga Rail Terminal (TRT); the original area outside the fence, northwest of the TRT, and an area within the fence, in the northeast section of the TRT property. The change was necessary to increase the survival rate by lengthening the plant spacing and to utilize the fauna for wind and snow breaks. The trees and shrubs were planted utilizing a John Deere 5100e tractor accompanied with a Mechanical Transplanter CT-5 tree planter. The three private property plantings (Dilland, Halverson, and Moe) were completed on October 16 and 17, 2018 and were installed by hand.

During the week of September 9, 2019, an inventory of trees and shrubs was conducted to determine the health of the Fall 2018 replacement process and to ensure a greater than 75% survival rate. It was determined that there was a 94% survival rate. Table 2-1 lists the species, the number of each species, the properties on which they were planted and survival rate. Appendix A presents the TRT planting configuration.

Table 2-1 Fall 2018 Replacement Trees/Shrubs Installed and Survival Rate

Landowner/Replacement Location	Tree/Shrub Type	Number	Mortality
USFS	Green Ash 1	-	-
Dilland	Chokecherry	50	2
Halverson	Chokecherry	12	-
Moe	Chokecherry	68	3
	Silver Buffaloberry	56	2
Hess Tioga Rail Terminal Northeast Area (Inside Fence)	Green Ash 1	-	-
	Chokecherry	4,997	298
	American Elm 1	-	-
	Nannyberry 1	-	-
	Downy Hawthorn 1	-	-
	Common Juniper	22	-
	Redosier Dogwood 1	-	-
Hess Tioga Rail Terminal Northwest Area (Outside Fence)	Green Ash 1	-	-
	Chokecherry	2,197	177
	American Elm 1	-	-
	Nannyberry 1	-	-
	Silver Buffaloberry	160	-
	Juneberry	160	-
	Skunkbush Sumac 1	-	-
Total		7,724	482

Mortality Rate: 6%
Survival Rate: 94%

Notes:

1 = Plantings commenced Spring 2019
 158 Oversupply of Chokecherry trees from nursery

3.0 SPRING 2019 REPLACEMENT PLAN

During the week of May 20, 2019, the remaining balance of trees and shrubs were replaced by LOWE'S Garden Center of Minot, North Dakota using the same or similar species on a 2:1 basis pursuant to the PSC Tree and Shrub Mitigation Specifications. Trees were replaced using 2-year-old saplings and shrubs with stem cuttings. Based on the 2:1 mitigation ratio, planting of at least 10,992 trees and shrubs was required. The nursery provided a surplus of 3 Green Ash, 23 Skunkbush Sumac, 1 Downy Hawthorn and 39 American Elm; therefore, increasing the total tree and shrub planting amount to 11,216. Unfortunately, it was a difficult growing season for the American Elm. The nursery was only able to attain 128 American Elm and therefore had to substitute 311 Boxelders for the American Elms. Most of the trees/shrubs were installed in two distinct areas at the TRT; the original area outside the fence, northwest of the TRT, and an area within the fence, in the northeast section of the TRT property. The trees and shrubs were planted utilizing a John Deere 5100e tractor accompanied with a Mechanical Transplanter CT-5 tree planter. The remaining 1,200 Green Ash trees were planted by hand on the United States Forestry Service (USFS) property (Chicken Creek) on May 14, 2019. This completes the PSC 2:1 mitigation ratio requirements for planting 10,992 trees and shrubs (Actual plantings 11,216).

Table 2-2 lists the species, the number of each species and the properties on which they were planted. Appendix B presents the USFS Green Ash planting configuration located within the Chicken Creek Watershed area, maps, and pictures.

Table 2-2 Replacement Trees and Shrubs Installed Spring 2019

Landowner/Replacement Location	Tree/Shrub Type	Required Replacement	Actual Installed	Mortality
USFS	Green Ash 1	1,200	1,200	NA
Dillard	Chokecherry	50	50	2
Halverson	Chokecherry	12	12	-
Moe	Chokecherry	68	68	3
	Silver Buffaloberry	56	56	2
Hess Tioga Rail Terminal Northeast Area (Inside Fence)	Green Ash 1	746	798	NA
	Chokecherry	4,839	4,997	298
	American Elm 1	200	65	NA
	Nannyberry 1	100	40	NA
	Downy Hawthorn 1	7	8	NA
	Common Juniper	22	22	-
	Redosier Dogwood 1	80	80	NA
Hess Tioga Rail Terminal Northwest Area (Outside Fence)	Green Ash 1	690	641	NA
	Chokecherry	2,197	2,197	177
	American Elm 1	200	63	NA
	Boxelder 1	0	311	NA
	Downy Hawthorn 1	1	1	NA
	Nannyberry 1	100	160	NA
	Silver Buffaloberry	160	160	-
	Juneberry	160	160	-
	Skunkbush Sumac 1	102	125	NA
Total		10,992	11,216	482

Mortality Rate: 6%
Survival Rate: 94%

Notes:

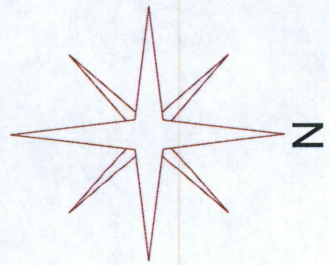
- 1 = Plantings commenced Spring 2019
- 158 Oversupply of Chokecherry trees from nursery (Fall 2018 planting)
- 3 Oversupply of Green Ash (1436 proposed, 1439 actual)
- 23 Oversupply of Skunkbush Sumac (102 proposed, 125 actual)
- 1 Oversupply of Downy Hawthorn (8 proposed, 9 actual)
- 39 Oversupply. 128 American Elm available (Difficult year for species), 400 American Elm proposed, 439 actual (128 American Elm, 311 Boxelder replaced the shortage of American Elm).
- NA=Not Audited due to Spring 2019 planting season

4.0 REPLACEMENT MONITORING

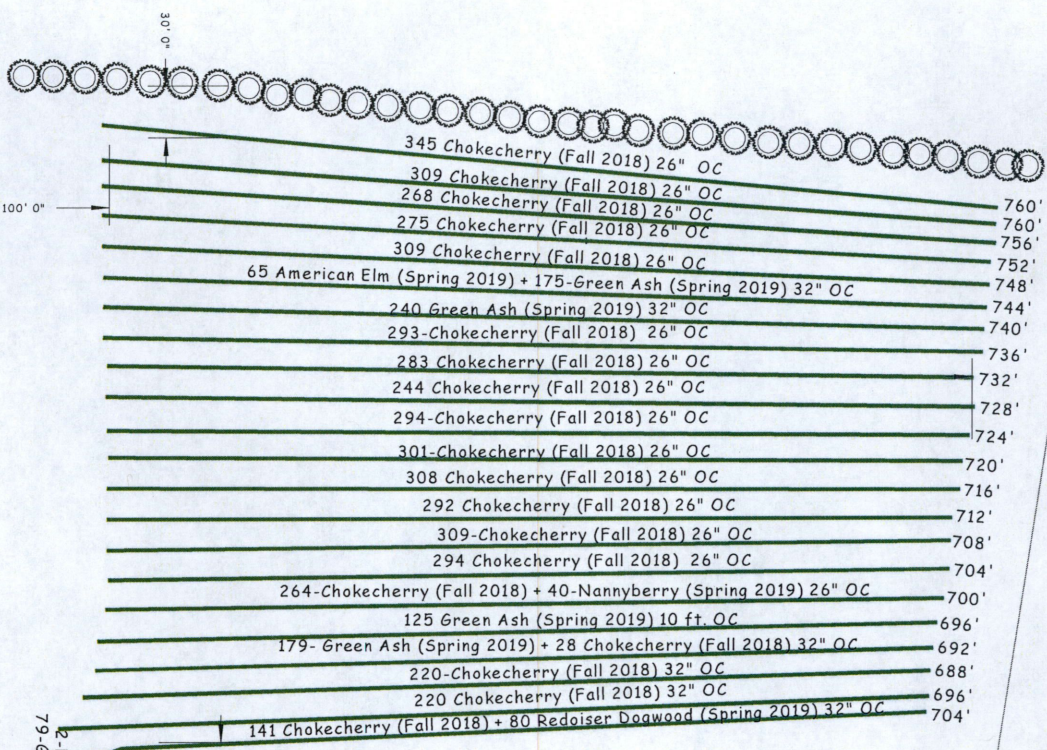
Hess completed year 1 of a 3-year survival rate inventory process. During the week of September 9, 2019 an inventory of trees and shrubs was conducted to determine the health of the Fall 2018 replacement process and to ensure a greater than 75% survival rate. It was determined that there was a 94% survival rate. The second survival rate inventory (2 of 3) of the trees and shrubs will be conducted and reported within the Fall of 2020.

APPENDIX A: TIOGA RAIL TERMINAL PROPERTY

NET RT TREE PLANTING



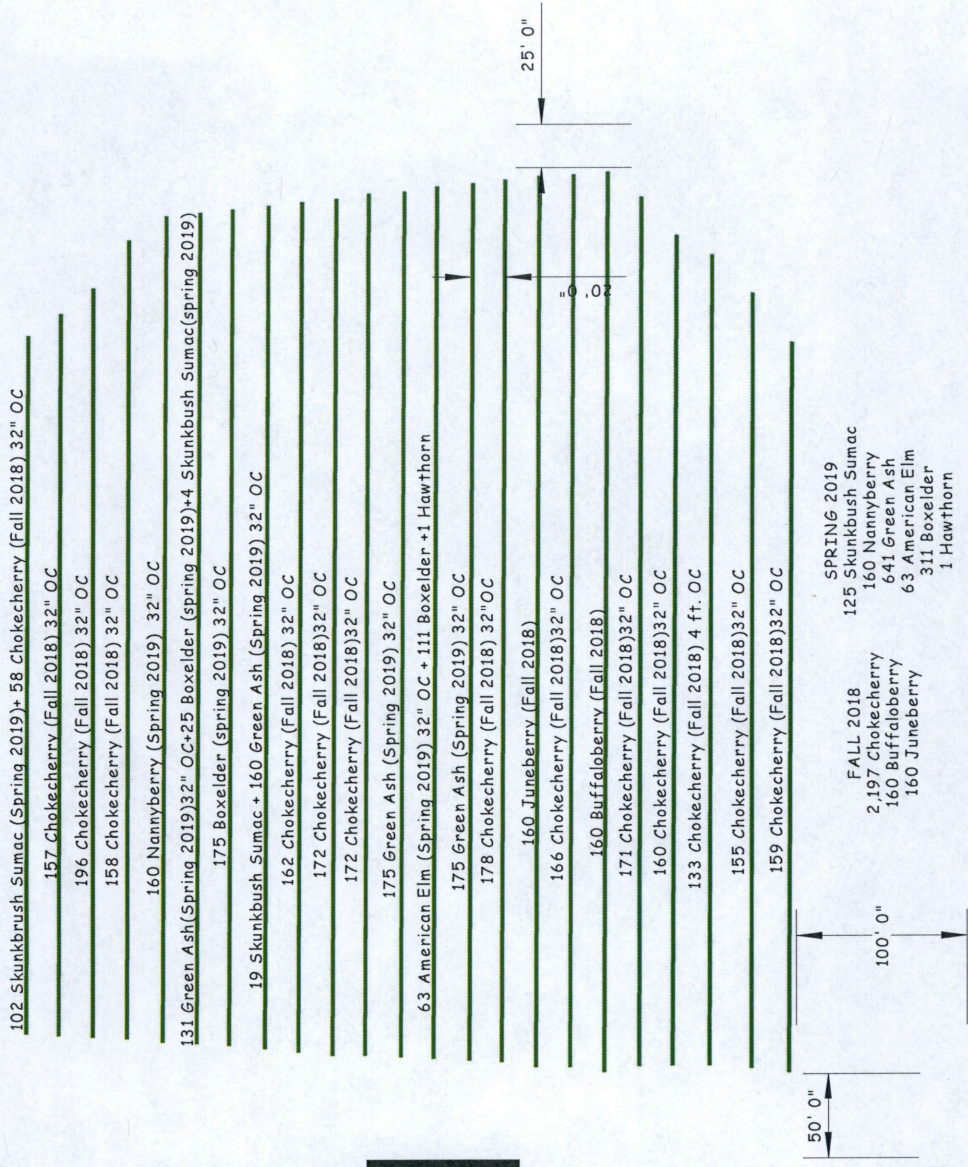
- Fall 2018**
- 4,997 chokecherry
- 2 Rocky Mt. Juniper
- 22-Common Juniper
- Spring 2019**
- 40-Nannyberry
- 80-Redoiser Dogwood
- 65-American Elm
- 798-Green Ash
- 8-Downy Hawthorn



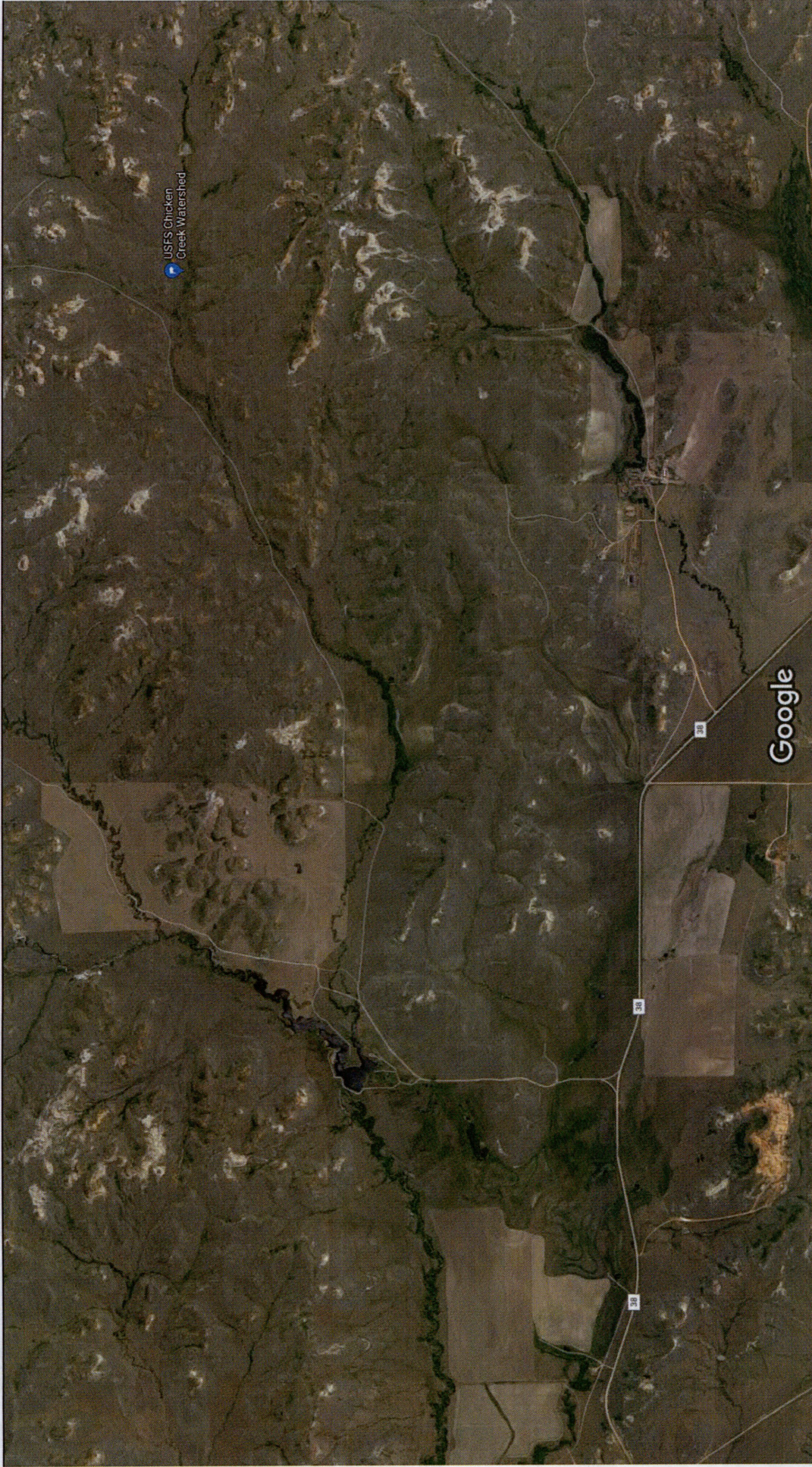
2-Rocky Mt. Juniper (Fall 2018) + 22 Common Juniper (Fall 2018)+
 79-Green Ash (Spring 2019)+8-Downy Hawthorn(Spring 2019) 32" OC

100' 0"
 335'
 16,251 ft

NW TRT Tree Planting



APPENDIX B: USFS Chicken Creek Watershed Property



Imagery ©2019 Google, Imagery ©2019 Landsat / Copernicus, Maxar Technologies, USDA Farm Service Agency, Map data ©2019 1000 ft



File Code: 1950/2210

Date: May 7, 2019

Route To: File

Subject: FSH 1909.15, 18.4 Review of Chicken Creek Watershed Rehabilitation Project
and Temporary Electric Fence

To: Project File

Hess Corporation (Hess), has requested to plant 1,200 green ash seedlings about 2 foot in height as part of mitigation efforts required by the Public Service Commission in the installation of a pipeline located on Forest Service lands in Section 10, T153N, R95W, 5th PM, McKenzie County, North Dakota. Forest Service staff decided the Chicken Creek Watershed, located in Sections 11 and 12, T147N, R103W, and Section 7, T147N, R102W, 5th PM, McKenzie County, North Dakota (please see attached map) would be an area that could benefit from the planting of these trees. Trees would be planted within the ephemeral Chicken Creek Drainage in the Chicken Creek enclosure. The main drainage where the trees will be planted will be fenced out with a temporary electric fence which will be installed in the spring of 2019 by members of the McKenzie County Grazing Association.

Analysis in compliance with the National Environmental Policy Act (NEPA) was completed on the Chicken Creek Watershed Rehabilitation Project. The Decision Memo was signed on October 8, 2004. The proposed tree plantings would occur in the effects area analyzed for the Chicken Creek Watershed Rehabilitation Project and would occur in Sections 11, and 12, T147N, R103W, and Section 7, T147N, R102W, 5th PM, McKenzie County, North Dakota. The trees would be planted in a naturally occurring landscape design selected by USFS specialists along the drainage. The sites would be selected to avoid any sensitive resources and would be based on site specific information to encourage growth of the seedlings and to help protect them from wildlife.

Analysis in compliance with the National Environmental Policy Act (NEPA) was completed on the approximate 10,000 foot temporary electric fence that will be installed in the spring of 2019. The letter to the file was signed on January 12, 2018.

An Interdisciplinary Team (IDT) was assembled to conduct a FSH 1909.15 Section 18 review of the existing environmental analysis and determined there is no new information or changed circumstances that would substantially change the existing analysis or its decision. Wildlife surveys were completed in April, 2019. One active golden eagle nest is located in the project area, therefore additional mitigation measures would be required if the project would be implemented during the nesting season (see mitigation measures listed below). Refer to the project file for more information. On-site surveys for archeology and botany were completed in May 2019 and no resource concerns were identified.

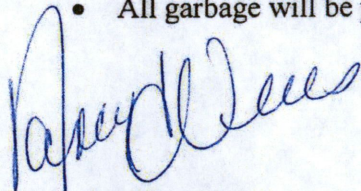


The trees will be planted in a 92 acre area of the drainage fenced off from livestock. In order to mitigate for golden eagle nests nearby, the fence will be installed with step-in posts. In order to adequately protect the trees from livestock, two strands of electric wire will be used.

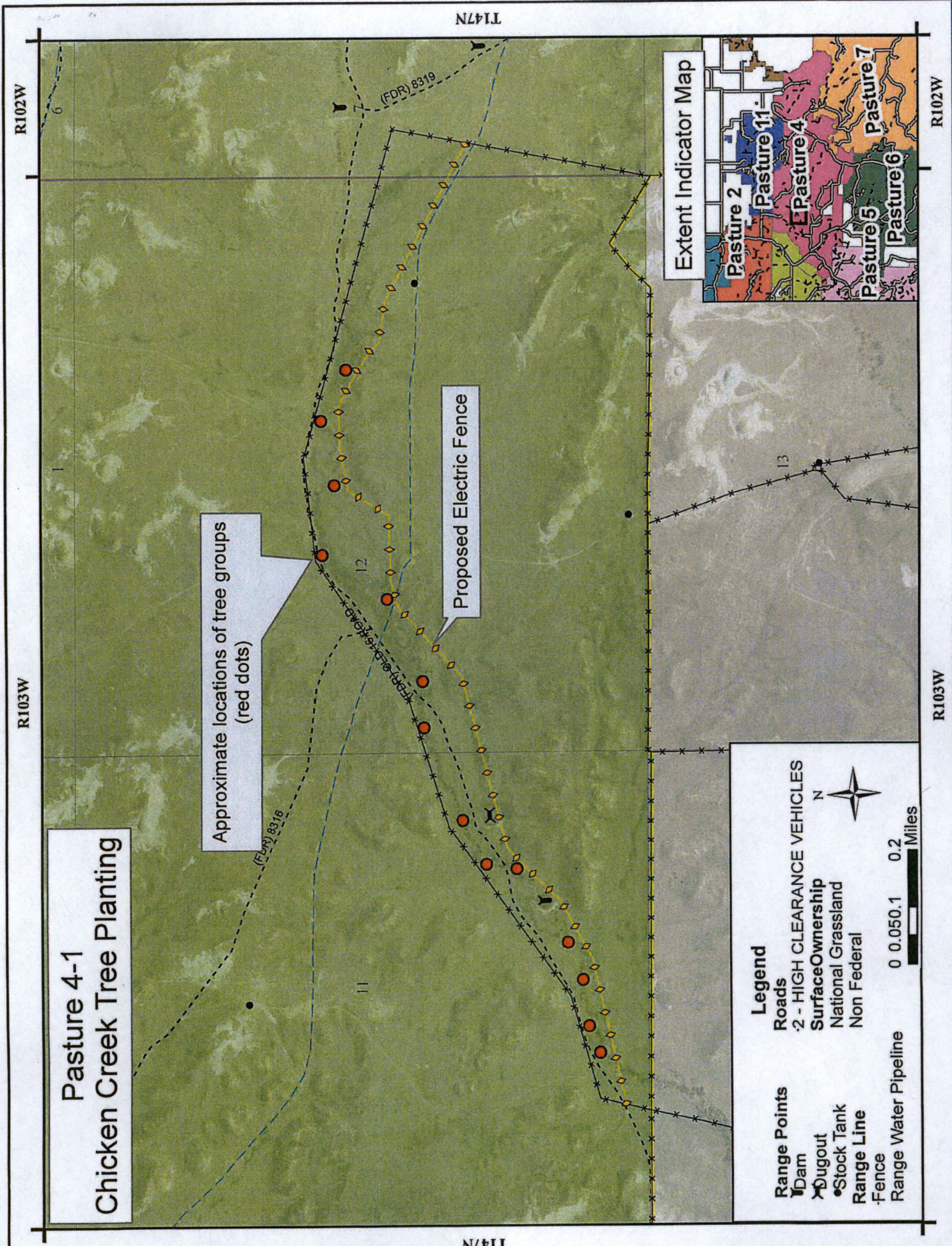
The IDT determined that the effects of this proposal are within the range of analyzed effects covered under the original EAs and are within the scope of the original decisions to authorize pipelines within the disturbance corridor. Based on this, no further analysis, DN or FONSI is needed at this time.

I am approving the planting of green ash trees in the Chicken Creek Exclosure with the stipulations stated below.

- Trees will be planted in 14 groups marked with flagging tape at 60 trees per group. Trees are to be spaced 5-10 feet apart. When near a mature tree, plant trees at least 10 feet away from the drip line to reduce interspecies competition.
- Between groups, trees may be scattered (20-35 trees between marked groups).
- Prime locations to plant the trees with greater chances of survival (though trees are not limited to these areas):
 - Within buffalo berry bushes and/or down trees
 - North-facing slopes
 - Areas that will receive and collect more moisture
- The prior approved two strand fence will be constructed before livestock will graze in this area, with step-in posts.
- Trees will be planted by hand to prevent noise disturbance of a nearby golden eagle nest.
- Vehicles no larger than a pickup will be used and will utilize the established roads and 2-track trails.
- If any archeological artifacts are discovered, construction will stop and the Forest Service office will be notified.
- No work will be done during periods of wet soil conditions.
- All vehicles and equipment used in the project will be cleaned with a high-pressure hose prior to entering the Grasslands to prevent the spread of invasive species or noxious weeds.
- Keep disturbance to a minimum to reduce impacts to native vegetation communities in general, and also to reduce the spread of invasive species.
- A fire extinguisher will be available during construction.
- Gates will be closed.
- All garbage will be picked up.



NANCY J. VERES
District Ranger



Pasture 4-1 Chicken Creek Tree Planting

Approximate locations of tree groups
(red dots)

Proposed Electric Fence

Extent Indicator Map

Legend

Range Points	Roads
Dam	2 - HIGH CLEARANCE VEHICLES
Dugout	Surface Ownership
Stock Tank	National Grassland
Range Line	Non Federal
Fence	
Range Water Pipeline	

0 0.050.1 0.2 Miles

0 0.050.1 0.2 Miles

0 0.050.1 0.2 Miles

