

# 10000 - Dickinson Research Extension Center Virtual Arboretum and Crop Tour

## Application Details

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<b>Funding Opportunity:</b>	7583-Outdoor Heritage Fund May 2021 - Round 18	<b>Initial Submit Date:</b>	May 3, 2021 9:29 AM
<b>Funding Opportunity Due Date:</b>	May 3, 2021 11:59 PM	<b>Initially Submitted By:</b>	Christopher Augustin
<b>Program Area:</b>	Outdoor Heritage Fund	<b>Last Submit Date:</b>	
<b>Status:</b>	Under Review	<b>Last Submitted By:</b>	
<b>Stage:</b>	Final Application		

## Contact Information

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### Primary Contact Information

**Active User\*:** Yes

**Type:** External User

**Name:** Dr. Christopher Lee  
Salutation First Name Middle Name

Augustin  
Last Name

**Title:** Director

**Email\*:** chris.augustin@ndsu.edu

**Address\*:** 1089 State Ave.

Dickinson North Dakota  
City State/Province

58601  
Postal Code/Zip

**Phone\*:** 701-265-2473 Ext.  
Phone  
###-###-####

**Fax:** ###-###-####

### Organization Information

**Status\*:** Approved

**Name\*:** NDSU Dickinson Research Extension Center

**Organization Type\*:** State Government

**Tax Id:**

**Organization Website:**

**Address\*:** 1041 State Ave.

Dickinson North Dakota  
City State/Province

58601-8237  
Postal Code/Zip

**Phone\*:** 701-456-1103 Ext.  
###-###-####

**Fax:** ###-###-####

**Comments:**

## Budget

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### ***Objective of Grant***

**Objective of Grant:**

This will create a self-guided virtual tour of the arboretum, horticulture, agriculture, and wildlife habitat demos. The virtual tour will use signage paired with smartphone technology to deliver information to attendees. This outreach is aimed to educate and showcase our heritage of ag and nature.

### ***Summary***

**Grant Request:** \$18,440.00

**Matching Funds:** \$6,196.00

**Total Project Costs:** \$24,636.00

**You must have at least 25% match**

**Percentage of Match:** 25.15%

***Project Expenses***

<b>Project Expense Description</b>	<b>OHF Request</b>	<b>Match Share (Cash)</b>	<b>Match Share (In-Kind)</b>	<b>Match Share (Indirect)</b>	<b>Other Project Sponsor's Share</b>	<b>Total Each Project Expense</b>
Entrance signs (15 signs at \$200 each)	\$7,500.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,500.00
Tree label plastic signs (200 signs at \$25 each)	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,000.00
Production agriculture factsheet signage (20 signs at \$100 each)	\$2,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,000.00
Tree factsheet signage (20 signs at \$100 each)	\$2,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,000.00
Production Agriculture & Tree Signage & Video Development Salary	\$1,770.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,770.00
Salary fringe benefits (10%)	\$170.00	\$0.00	\$0.00	\$0.00	\$0.00	\$170.00
Salary and fringe benefits Chris Augustin (2%)	\$0.00	\$0.00	\$0.00	\$2,730.00	\$0.00	\$4,918.00
Salary and fringe benefits Joe Zeleznik (2%)	\$0.00	\$0.00	\$0.00	\$2,188.00	\$0.00	\$2,188.00
Indirect costs (26%)	\$0.00	\$0.00	\$0.00	\$1,278.00	\$0.00	\$1,278.00
	<b>\$18,440.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$6,196.00</b>	<b>\$0.00</b>	<b>\$26,824.00</b>

***Budget Narrative***

**Budget Narrative:**

Large (3x3ft) entrance signs (15 signs at \$200 each) will be posted at the public area access points. Signs will recognize the Outdoor Heritage Fund's support with creating the virtual walking tour. The entrance signs will indicate the public areas and include QR codes to access virtual tour information (\$7,500 total). Tree label plastic signs (200 at \$25 each) identifying the species and with QR codes will be staked in front of the trees (\$5,000 total). Tree factsheet signage (20 signs at \$100 each) and production agriculture signage (20 signs at \$100 each) will be placed about the DREC to improve inclusion. That way people without smartphone technology can still learn from the virtual tour. The tree factsheet signage total cost will be \$2,000 and the production agriculture factsheet signage total cost will be \$2,000. Videos to educate the public on trees and production agriculture will be developed and accessible via QR coded signs. The cost to develop the videos and signage information is budgeted at \$1,770 (118 hours at \$15 per hour) and \$170 for 10 percent fringe benefits.

## Bid Attachments

Description	File Name	Type	Size	Upload Date
	No files attached.			

## Match Funding

Match Amount	Funding Source	Match Type
\$1,278.00	NDSU	Indirect
\$2,188.00	NDSU	Indirect
\$2,730.00	NDSU	Indirect
<b>\$6,196.00</b>		

## Description

### Directives

Major Directive*:	Directive D Choose One
Additional Directive:	Directive B, Directive C Choose All That Apply
Type of Agency*:	State Agency Choose One

### Abstract/Executive Summary

#### Abstract/Executive Summary\*:

The Dickinson Research Extension Center Virtual Agriculture and Arboretum Tour will be a hub of agriculture and natural resource education to the public. This project will create a self-guided virtual tour and will use signage paired with smartphone technology to deliver information to tour participants. People interested in a specific tree can visit the DREC, scan a QR code with a smartphone to see the location of a specific species. Once at the tree of interest, a participant can scan another QR coded sign that is on the tree label plastic sign and view a factsheet or in special cases, a video regarding the tree of interest.

This project will improve the public's disconnect with production agriculture. Livestock and crop production signage will be placed throughout the area and include videos accessible through QR codes. Grazing information signage will be placed within the native prairie demonstration. Ten crops important to North Dakota will be planted annually in the area. The crop demonstrations will have signage paired with QR codes and videos and/or factsheets accessible on smartphones.

Native prairie, pollinator plants, and wildlife habitat are important to North Dakota's resources and heritage. A grant has been submitted to the North Dakota Resources Trust to establish a pollinator and prairie demonstration paired with education resources. A grant is being developed and will be submitted to the North Dakota Game and Fish to establish a wildlife habitat demonstration and educational materials.

### Project Duration

#### Project Duration\*:

We are seeking funding for June 1, 2021 to December 31, 2022. However, the intent of this project is to be perpetual.

## Narrative

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### ***Narrative***

Briefly summarize your organization's history, mission, current programs and activities. Include an overview of your organizational structure, including board, staff and volunteer involvement.

### **Organization Information\*:**

The Dickinson Research Extension Center is one of seven branch research extension centers of the North Dakota State University Agricultural Experiment Station. The Dickinson Research Extension Center has improved the lives of people through science-based outreach and research important to the region.

The Dickinson Research & Extension Center was established by the 1905 North Dakota Legislature as a research location representative of the Missouri Plateau region. The goal was to develop research on crop production for farmers of the region and to improve native and introduced forage crop production for cattle ranchers. Over the years the Center has grown from the original 160 acres to the current 6,482 acres in several different locations in southwest North Dakota with 10 acres of certified organic land at the main office in Dickinson. The main office boasts more than 30 acres of land planted with various trees, ornamental plants, wildlife habitat, and walking trails available to the public.

Staff at the Dickinson Research Extension Center includes an animal scientist, agronomist, rangeland scientist, and soil scientist. Multi-disciplined Extension staff and main campus staff that include forestry are involved with many projects. The Dickinson Research Extension Center has hosted various 4-H youth and agricultural education activities.

### **Describe the proposed project identifying how the project will meet the specific directive(s) of the Outdoor Heritage Fund Program.**

Identify project goals, strategies and benefits and your timetable for implementation. Include information about the need for the project and whether there is urgency for funding. Indicate if this is a new project or if it is replacing funding that is no longer available to your organization. Identify any innovative features or processes of your project.

Note: if your proposal provides funding to an individual, the names of the recipients must be reported to the Industrial Commission/Outdoor Heritage Fund. These names will be disclosed upon request.

If your project involves an extenuating circumstance to exempted activities please explain.

### **Purpose of Grant\*:**

This project is in the city limits of Dickinson. However, the living snow fence (grant proposal submitted to North Dakota Forest Service), pollinator garden (proposal submitted to North Dakota Natural Resources Trust), and wildlife food plot (proposal being developed for North Dakota Game and Fish Department) will create wildlife habitat. The habitat will increase plant diversity as many species of native pollinators and trees will be planted. The production agriculture demonstrations and videos will improve society's understanding of, and decrease their disconnect with, food production systems. The virtual arboretum will educate people on tree care in North Dakota which will help develop future wildlife habitats.

### **Please list the counties that would be impacted by this project:**

**Counties\*:**

Stark

**Is This Project Part of a Comprehensive Conservation Plan?\*** No

**If Yes, Please Provide Copy of Plan:**

**Does Your Project Involve an Extenuating Circumstance?\*** No

**Please Explain:**

Provide a description of how you will manage and oversee the project to ensure it is carried out on schedule and in a manner that best ensures its objectives will be met. Include a brief background and work experience for those managing the project.

**Management of Project\*:**

Signage and videos will be developed during 2021 to 2022. Signage will be placed during the spring and summer of 2022. Tree signage, factsheets, and videos will be developed by Joe Zeleznik, NDSU Extension Forester. Production agriculture materials will be developed by Chris Augustin, Director/Soil Scientist at the Dickinson Research Extension Center.

Indicate how the project will be funded or sustained in future years. Include information on the sustainability of this project after OHF funds have been expended and whether the sustainability will be in the form of ongoing management or additional funding from a different source.

**Sustainability\*:**

The Dickinson Research Extension Center has three grounds-keepers during the summer. Once materials are developed, signage will be installed during 2022. The intent of this project is to be perpetual as grounds are continuously kept during the growing season.

Indicate how the project will be affected if less funding is available than that requested.

**Partial Funding\*:**

Partial funding will decrease the amount of signage placed at the Dickinson Research Extension Center.

If you are a successful recipient of Outdoor Heritage Fund dollars, how would you recognize the Outdoor Heritage Fund partnership? \* There must be signage at the location of the project acknowledging OHF funding when appropriate. If there are provisions in that contract that your organization is unable to meet, please indicate below what those provisions would be.

**Partnership Recognition\*:**

Entrance signage will acknowledge the Outdoor Heritage Fund's support.

Do you have any supporting documents, such as maps or letters of support that you would like to provide? If so, please provide them in a single file.

**Supporting Documents\*:** Yes

**If Yes, Please Provide Copies in a Single File:** Heritage Fund Maps.pdf

Awarding of Grants - Review the appropriate sample contract for your organization. Sample Contract

**Can You Meet All the Provisions of the Sample Contract?\*** Yes

If there are provisions in that contract that your organization is unable to meet, please indicate below what those provisions would be:

**Provisions Unable to Meet:**

## Tasks

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### Tasks

Task	Start Date	Completion Date
Develop tree label plastic signs	07/01/2021	05/28/2021
Place signage	05/02/2022	09/03/2021
Production agriculture and tree signage and video development	07/01/2021	08/01/2022

### Description of Tasks

**Please Describe Tasks:**

Tree factsheet signage, production agriculture signage, and videos will be developed from 2021-2022. As materials are developed, they will be housed on the Dickinson Research Extension Center website. Signage will be made during the winter of 2021. Signs will be placed accordingly during the summer of 2022.

## Deliverables

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### Deliverables

Deliverable	Quantity	Unit of Measurement, if applicable
Production agriculture and tree outreach to the public	5000.000	Website hits from virtual tour participants viewing fact sheets each year.

## Certification

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### Certification

**Certification:** Yes

**Name:** Chris Augustin  
First Name Last Name

**Title:** Director  
Title

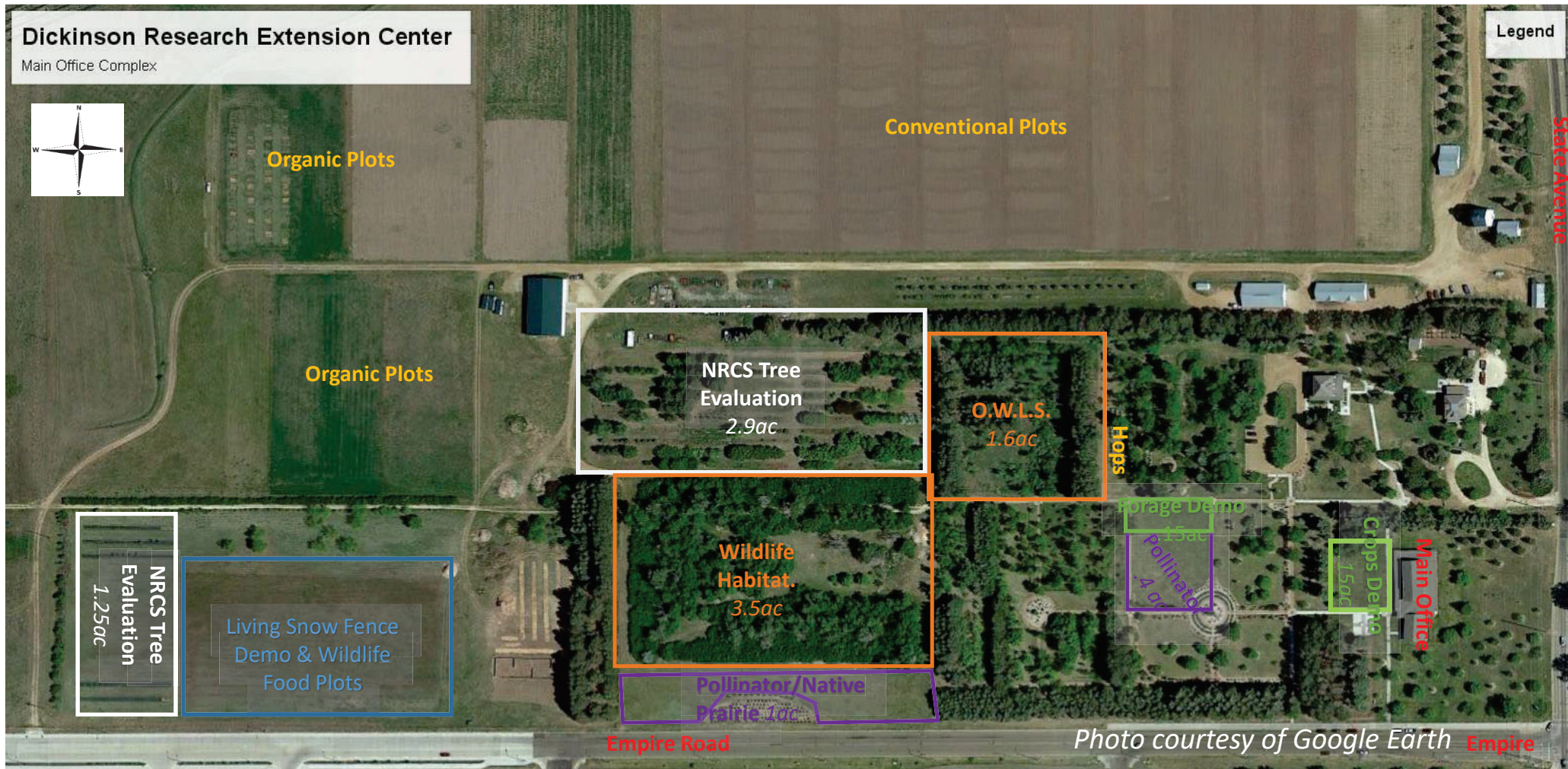
**Date:** 05/03/2021

### Internal Application Number

**#/ID:** 18-13

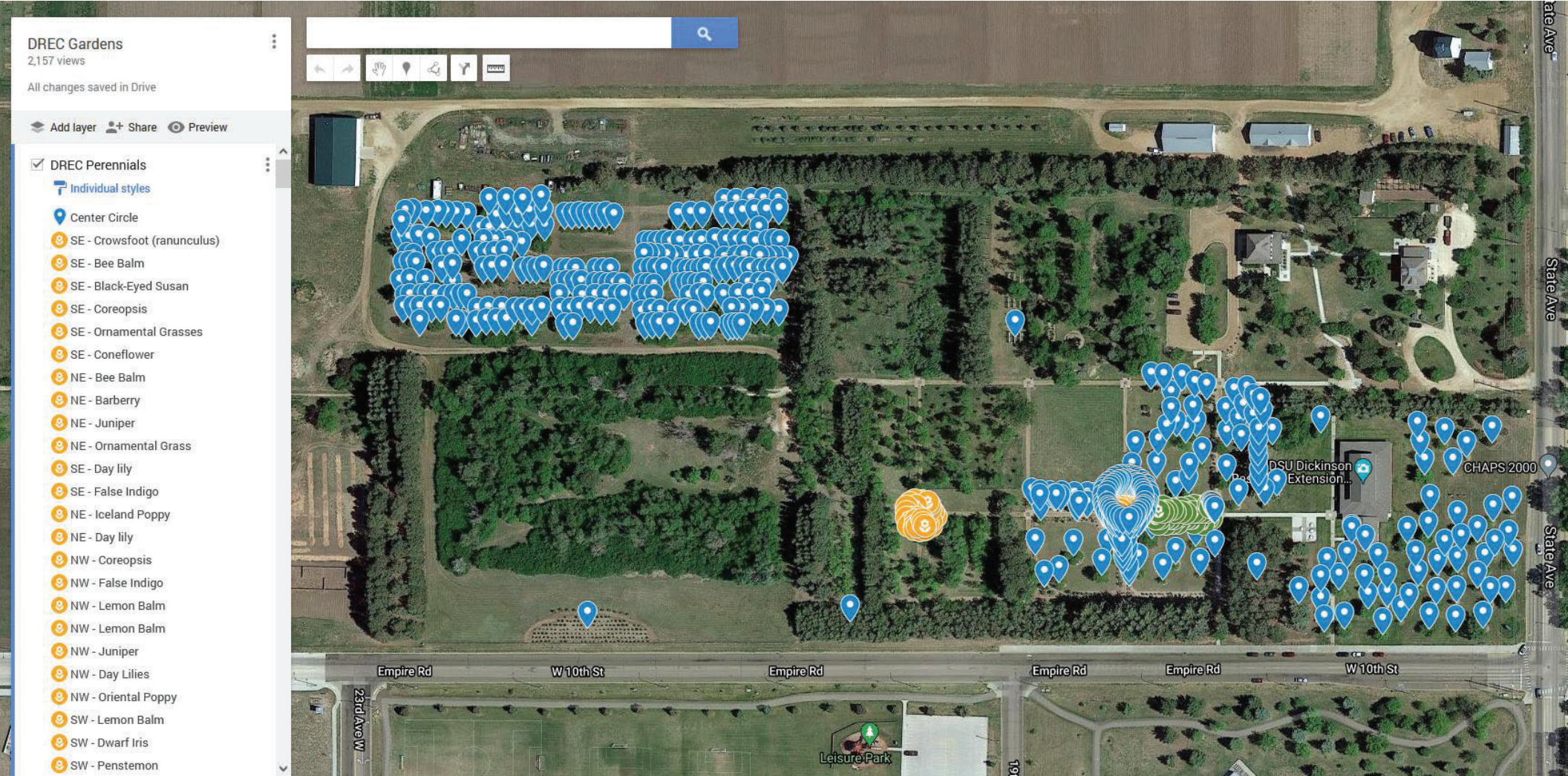


# Map of Dickinson Research Extension Center Virtual Arboretum and Production Agriculture Tour

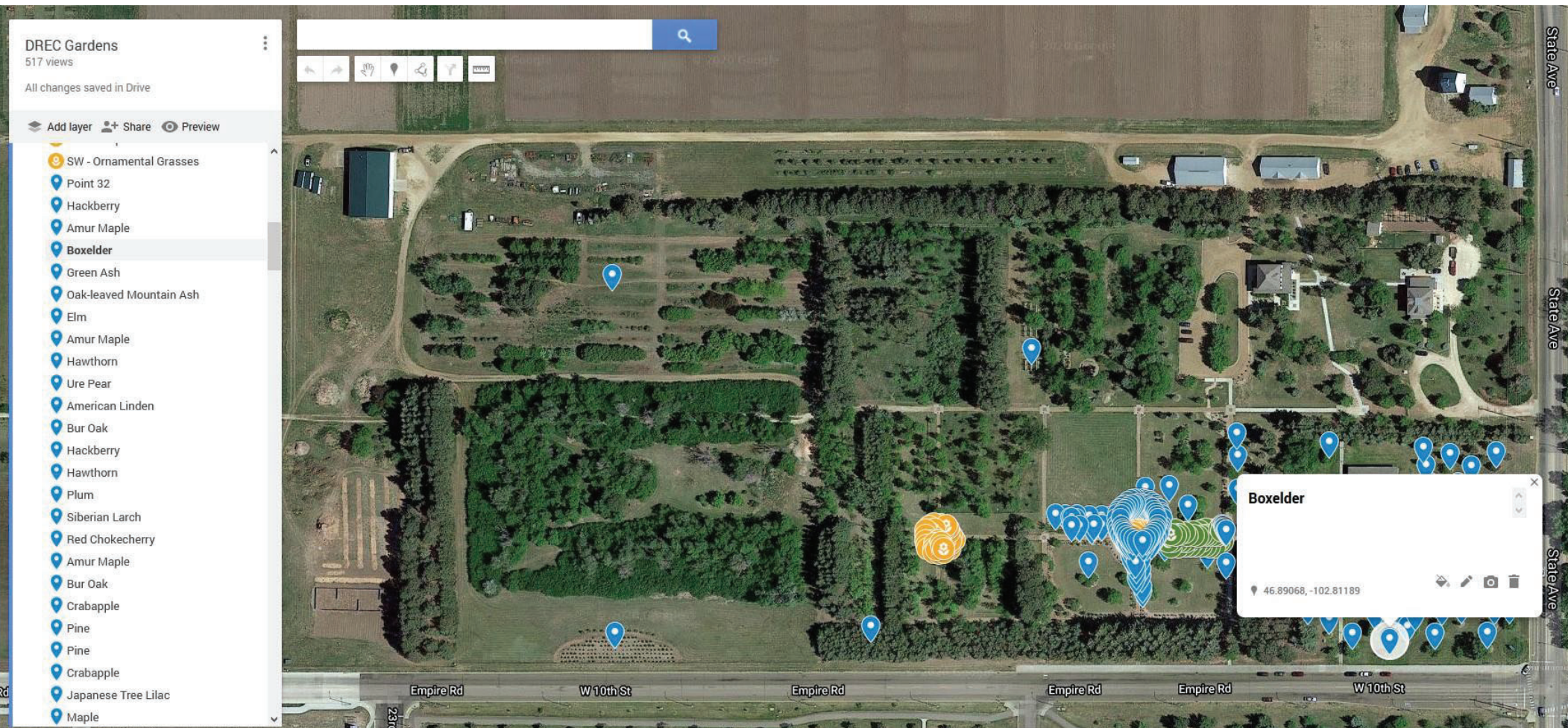




Current online tree inventory available at Dickinson Research Extension Center Website. Available at:  
<https://www.google.com/maps/d/edit?mid=1ySI2SaahS68jpD-xNN-mVZE035wCWxzv&ll=46.89150063700124%2C-102.8149420477543&z=18>

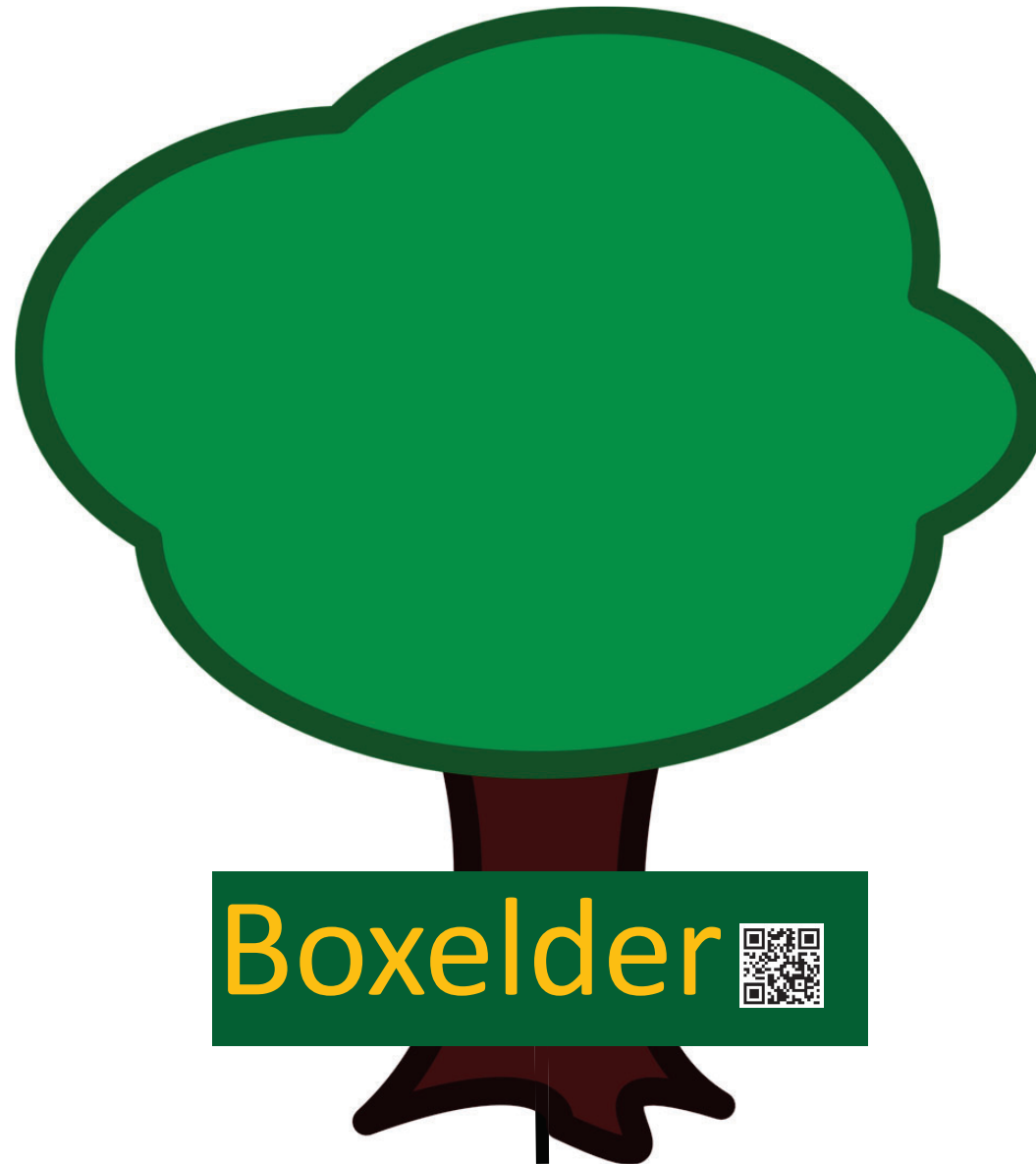






Example of locating a specific tree.

Example of a  
Plastic Tree  
Label.





# North Dakota Tree Selector

## General

**Scientific Name:** *Acer negundo*

**Family:** Sapindaceae (Maple)

**Hardiness:** Zone 2

**Leaves:** Deciduous

**Plant type:** Tree

## Growth

**Rate:** Fast

**Mature height:** >45'

**Longevity:** Long

**Power Line:** No

## Ornamental

**Flowers:** Inconspicuous

**Fruit:** Tan Samara

**Fall Color:** Yellow

## Boxelder

### Description

A relatively fast-growing, short-lived, medium-to-tall tree of irregular form. Boxelder are native to river bottoms, ravines and hillsides. Foliage is very susceptible to phenoxy herbicides. Also called Manitoba maple or ash-leaved maple. The largest tree in North Dakota is 61 feet tall with a canopy spread of 63 feet.

### Preferences

**Light:** Full sun to part shade

**Water:** Medium to high

**Soil:** Adaptable to a wide range.

### Comments

The name boxelder (sometimes box elder) is in reference to a use of the wood for making crates and boxes and the supposed similarity of the leaves to those of elder (*Sambucus*). Leaves also resemble those of some ashes, hence the additional common name of ash-leaved maple. Leaves have 3-5 leaflets and can be confused with poison ivy.

Credits: Tree Selector Website, <http://www.missouriherbarium.org/PlantFinder/PlantFinderDetails.aspx?kempercode=a841>



**NDSU** [www.ag.ndsu.edu/tree-selector](http://www.ag.ndsu.edu/tree-selector)

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Example a Tree  
Factsheet  
available from  
scanning a QR  
code.