



# Environment and Natural Resources Trust Fund

M.L. 2020 Approved Work Plan

## General Information

**ID Number:** 2020-021

**Staff Lead:** Rory Anderson

**Date this document submitted to LCCMR:** August 13, 2021

**Project Title:** Engaging Minnesotans With Phenology: Radio, Podcasts, Citizen Science

**Project Budget:** \$198,000

## Project Manager Information

**Name:** David Baes

**Organization:** Northern Community Radio, Inc.

**Office Telephone:** (218) 326-1234

**Email:** dbaes@kaxe.org

**Web Address:** <https://www.kaxe.org/#stream/0>

## Project Reporting

**Date Work Plan Approved by LCCMR:** August 13, 2021

**Reporting Schedule:** April 1 / October 1 of each year.

**Project Completion:** June 30, 2024

**Final Report Due Date:** August 14, 2024

## Legal Information

**Legal Citation:** M.L. 2021, First Special Session, Chp. 6, Art. 5, Sec. 2, Subd. 05h

**Appropriation Language:** \$198,000 the second year is from the trust fund to the commissioner of natural resources for an agreement with Northern Community Radio, Inc., in partnership with the Board of Regents of the University of Minnesota to build the next generation of conservationists using phenology, radio broadcasts, podcasts, and an online, interactive map interface to inspire teachers, students, and the public to get outside and experience nature.

**Appropriation End Date:** June 30, 2024



## Narrative

**Project Summary:** This education project will build the next generation of conservationists in Minnesota by engaging youth and adults in science and outdoor learning through radio, podcasts, citizen science and schoolyard exploration.

**Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.**

For more than thirty years, John Latimer has led the Phenology Show at Northern Community Radio, KAXE/KBXE, based in Grand Rapids, MN, inspiring 1000s of people in to pay attention to what's happening in nature in their backyards and woodlots and share it with others. Every Tuesday morning, John gathers his phenology data and reports his findings in the weekly Phenology Report. Every week in Phenology Talkback we hear from Minnesota school kids and regular listeners as they call or email us with their nature observations. Bobcat tracks, downy woodpeckers, a snowdrift covering a classroom window (which a hero-custodian cleared away), a close study of layers of snow and much more are included in these phenology reports.

Phenology is an important tool for creating personal connection to places. We know that "place connection" is a key component of pro-environmental and conservation behavior. Our project builds on John's legacy by developing new programs that strengthen place connection and inspire the next generation of conservationists in Minnesota.

**What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.**

At a time when outdoor engagement is dropping (e.g., statewide reductions in hunting and fishing), our project uses technology to draw people outdoors. We will do this by:

- developing new radio programming and podcasts that inspire listeners to engage with the outdoors and share their experiences
- expanding current partnership programs between KAXE and K-12 schools by offering workshops statewide that train teachers and 4-H leaders in existing phenology curricula, developing radio reports from schools, and supporting participating schools with follow-ups
- creating an online map based interface that will allow anyone – adult radio listeners, teachers and kids in school programs – to compare what they are seeing with others in Minnesota and with historical data compiled by the Minnesota Phenology Network.

In summary, this project will result in a set of tools equally accessible to the public, teachers and school kids that deliver science content and inspire people to get outdoors and build community around the environment through radio, podcasts, web-based data collection and nature exploration

**What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?**

"Alexa, play the KAXE phenology school reports"

Deliver engaging environmental programming to Northern Minnesota through radio and podcasts.

Create a statewide program for school kids combining phenology observation with radio broadcasting.

Build interactive digital map of statewide phenology data and regional phenology calendars.

## Project Location

**What is the best scale for describing where your work will take place?**

Statewide

**What is the best scale to describe the area impacted by your work?**

Statewide

**When will the work impact occur?**

During the Project and In the Future

## Activities and Milestones

### Activity 1: Deliver engaging environmental programming to Northern Minnesota through radio and podcasts

**Activity Budget:** \$70,456

**Activity Description:**

Description: We will expand our current portfolio by developing three new programs: monthly interviews with environmental scientists, podcasts related to the seasons of the year, and monthly radio segments about statewide phenology that will be made available to other public radio stations in Minnesota. These public radio broadcasts and podcasts will educate and engage people in northern MN—and elsewhere around the state—about environmental science and its relationship to observable nature.

**Activity Milestones:**

Description	Completion Date
24 radio segments that present interviews with scientists (approx 12 segments/year)	June 30, 2024
24 short radio segments of statewide phenology happenings shared with other MN noncommercial radio stations	June 30, 2024
8 podcasts created and available online (spring, summer, fall, winter each year)	June 30, 2024

### Activity 2: Create a statewide program for school kids combining phenology observation with radio broadcasting

**Activity Budget:** \$40,251

**Activity Description:**

expand existing school partnerships in environmental education statewide and also work with county 4-H programs. With UMN extension support, we will offer teachers and 4-H leaders training in our phenology and radio curriculum once per season for two years (8 workshops) rotating the location around the state (NE, NW, SE, SW). The curriculum involves basic phenology observations combined with developing short school phenology reports for radio broadcast. We will offer a helpline, pair teachers and 4-H leaders with a Master Naturalist and provide 1-1 follow-up meetings to ensure strong support of classroom implementation. Further, we will develop easy data input for school reports that supports the map of observations in Activity 3.

**Activity Milestones:**

Description	Completion Date
8 workshops that train teachers who engage 2400 students (4 workshops per year)	June 30, 2024
360 radio segments created by kids in school programs (approximately 160 radio segments/year)	June 30, 2024

### Activity 3: Build an interactive digital map of statewide phenology data and regional phenology calendars

**Activity Budget:** \$87,293

**Activity Description:**

create an online map interface for comparing current observations to others and to the past. Users will click on their location and search for earliest, latest and average time of a phenological event such as lilac blooming or sandhill crane return. In addition, they can view what others in the state are seeing. This interactive web application will allow people to place their personal observations in a broader context and build community and awareness. In addition, we'll create

regional phenology calendars available online and in print form that serve as guides to what to look for each month as well as personal journals.

**Activity Milestones:**

Description	Completion Date
Online release of the interactiv digital map of phenology date	December 31, 2023
Web tool to compare current observations to past and to others in the state goeslive	December 31, 2023
Online and print regional phenology calendars - 3681 print copies distributed	December 31, 2023

## Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Rebecca Montgomery	University of Minnesota	We will subcontract with Rebecca Montgomery and the University of MN Department of Forest Resources for part of the services we hope to provide through this proposal	No
Stephan Carlson	University of Minnesota	Stephan Carlson is an Adjunct Professor in Forestry at the U of MN who will assist with providing teacher trainings and other services through this proposed project.	Yes

## Dissemination

**Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.**

This entire project is about dissemination: the act of carrying out the project creates educational programs that disseminate what we know about and can learn from phenology. In addition, we will share the monthly interviews with environmental scientists, podcasts related to the seasons of the year, and monthly radio segments about statewide phenology with other radio stations and online on the KAXE website. Materials from Activity 2 will be available through the MnPN website. The online map interface will be publically available through the University of Minnesota. We will work with local media outlets to raise awareness about our programming.

The Minnesota Environment and Natural Resources Trust Fund (ENRTF) will be acknowledged through use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications per the ENRTF Acknowledgement Guidelines.

## Long-Term Implementation and Funding

**Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this be funded?**

Long term: Web map will be hosted by University of Minnesota. Radio broadcasts and podcasts will be available through KAXE website.

## Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Assessing Species Vulnerability to Climate Change Using Phenology	M.L. 2014, Chp. 226, Sec. 2, Subd. 05e	\$175,000

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Producer		identify and set up interviews, enter data from schools, produce web stories and interfaces, share information on social media, newspapers, etc			39%	0.9		\$46,800
Production supervisor		Work with producer to train, coordinate, and assist with all aspects of radio production			45%	0.1		\$6,656
Administration		Coordinate and administer the grant to be sure outcomes are achieved, bills are paid, reporting is accomplished			40%	0.06		\$4,200
Phenologist		conduct teacher trainings and followups			20%	0.08		\$4,600
							<b>Sub Total</b>	<b>\$62,256</b>
<b>Contracts and Services</b>								
Contract producer	Professional or Technical Service Contract	produce 24 statewide phenology episodes				0.18		\$15,600
University of Minnesota	Sub award	Phenology data interpretation; digital Arts, Science, and Humanities mapping; teacher training sessions. The entity is a co-collaborator on this project				1.2		\$102,222
This is Folly	Professional or Technical Service Contract	Graphic design for phenology calendars per state contracting rules.		X		0.04		\$4,000
							<b>Sub Total</b>	<b>\$121,822</b>
<b>Equipment, Tools, and Supplies</b>								
							<b>Sub Total</b>	-
<b>Capital Expenditures</b>								
							<b>Sub Total</b>	-



<b>Acquisitions and Stewardship</b>								
							<b>Sub Total</b>	-
<b>Travel In Minnesota</b>								
	Miles/ Meals/ Lodging	8 training sessions @ 500 miles/session, 1 person @ .545/mile; 30 follow-up sessions, 250 miles/session, 1 person @ .545/mile: per commissioner's plan for lodging, 8 sessions, 1 person @ \$94/night; per commissioner's plan for food, 8 sessions, 1 person @ \$46/day	teacher training and teacher follow-up training					\$8,400
							<b>Sub Total</b>	<b>\$8,400</b>
<b>Travel Outside Minnesota</b>								
							<b>Sub Total</b>	-
<b>Printing and Publication</b>								
	Printing	calendars (3681 @ 1.50/calendar)	phenology calendars for distribution to students and others to track nature sightings					\$5,522
							<b>Sub Total</b>	<b>\$5,522</b>
<b>Other Expenses</b>								
							<b>Sub Total</b>	-
							<b>Grand Total</b>	<b>\$198,000</b>

## Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
<b>Contracts and Services</b> - This is Folly	Professional or Technical Service Contract	Graphic design for phenology calendars per state contracting rules.	This is Folly has designed and printed phenology calendars for a related project led by Rebecca Montgomery. As such the majority of the graphic design is complete. The current existing design would be modified for our specific project. Modification of existing work is much easier and lower cost than beginning a phenology calendar design from scratch with a new service provider. <b>This is a single source contract.</b>

## Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
<b>State</b>				
In-Kind	UMN unrecovered ICR @ 52% (\$103,203); R. Montgomery, in-kind salary, 0.04 FTE for two years (\$11,000)	Project collaborator	Pending	\$114,203
			<b>State Sub Total</b>	<b>\$114,203</b>
<b>Non-State</b>				
			<b>Non State Sub Total</b>	-
			<b>Funds Total</b>	<b>\$114,203</b>

## Attachments

### Required Attachments

#### *Visual Component*

File: [c58c7363-879.pdf](#)

#### *Alternate Text for Visual Component*

Overarching Goal: to build the next generation of conservationists in Minnesota though through radio programming, podcasts, digital media, citizen science and schoolyard exploration

Photo: John Latimer, staff phenologist at KAXE/KBXE; Caption: Develop new radio programs and podcasts that inspire people to get outside and enjoy nature

Photo: Teacher with students outside; Caption: Expand schoolyard program statewide

Photo: Map with choices to enter bird sightings; Caption: View historical dat...

#### *Financial Capacity*

File: [487c107f-0a9.pdf](#)

#### *Board Resolution or Letter*

Title	File
Northern Community Radio Board Resolution	<a href="#">19229113-3e1.pdf</a>

### Optional Attachments

#### *Support Letter or Other*

Title	File
Background Check Certification	<a href="#">0ec95dd7-831.pdf</a>

## Difference between Proposal and Work Plan

### *Describe changes from Proposal to Work Plan Stage*

We provided justification for a single source contract for \$4000. We revised the 'Contract or Service Type' to the University of Minnesota to a 'sub award.' There was a change to the job title of one of the project collaborators, Stephan Carlson.

## Additional Acknowledgements and Conditions:

The following are acknowledgements and conditions beyond those already included in the above workplan:

**Do you understand and acknowledge the ENRTF repayment requirements if the use of capital equipment changes?**

N/A

**Do you agree travel expenses must follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?**

Yes, I agree to the Commissioner's Plan.

**Does your project have potential for royalties, copyrights, patents, or sale of products and assets?**

No

**Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?**

N/A

**Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?**

N/A

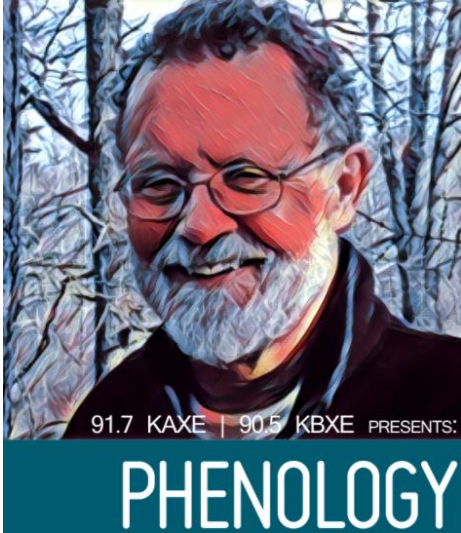
**Does your project include original, hypothesis-driven research?**

No

**Does the organization have a fiscal agent for this project?**

No

Overarching Goal: to build the **next generation of conservationists** in Minnesota though through radio programming, podcasts, digital media, citizen science and schoolyard exploration



Develop new **radio programs** and **podcasts** that inspire people to get outside and observe nature.

Expand schoolyard program statewide and get **kids doing nature reports on the radio!**



**View** historical data and **add** observations through an easy to use **map interface**

