



# 2023-2024 Report Card

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## The Environmental Institute is the Tribal College 1994 Land Grant Extension Department

### Mission Statement

To promote the education and cultural growth of the community in natural resources and the environment. The Environmental Institute supports and coordinates education, research, and outreach that serve our greater community.

### The Environmental Institute Catalyst for Change

The Environmental Institute is determined to be a catalyst for positive change. We are dedicated to providing education, skills, and research that help our communities connect with empowering opportunities and partnerships through culturally relevant research and programming.

**A \$9 million grant was awarded in June 2023 to FDLTCC and Leech Lake Tribal College.**

This grant is part of the USDA's inaugural From Learning to Leading: Cultivating the Next Generation of Diverse Food and Agriculture Professionals Program (NextGen). FDLTCC and Leech Lake Tribal College are excited to work together to build sustainable educational and experiential systems that prepare Tribal college students to enter agricultural and STEM workforces. Our NextGen project offers holistic support for students to successfully achieve academic and career goals through scholarships, internships, hands-on learning, and community engagement.



# Ashi-Niswi Giizisoog

# Thirteen Moons

A turtle's shell has a unique pattern of 13 large scales in the center - representing the thirteen moons of the lunar calendar. The circle of 28 scales, circling the edge of the shell, corresponds to the number of days comprising the lunar cycle.

**gichi-manidoo giizis**

January  
Great Spirit Moon

**manidoo giizisoons**

December  
Little Spirit Moon

**namebini giizis**

February  
Sucker Fish Moon

**gashkadino giizis**

November  
Freezing Moon

**onaabani giizis**

March  
Hard Crust on Snow  
Moon

**binaakwii giizis**

October  
Falling Leaves Moon

**iskigamizige giizis**

April  
Maple Sap Boiling  
Moon

**waatebagaa giizis**

September  
Great Spirit Moon

**waabigwaniii giizis**

May  
Flowering Moon

**manoominike giizis**

August  
Ricing Moon

**ode'imini giizis**

June  
Strawberry Moon

**aabita-niibino giizis**

July  
Mid Summer Moons  
(2)



**Thirteen Moons is a Tribal Extension Program with a mission to:**

- Share knowledge of Ojibwe culture
- Increase awareness of natural resources
- Provide new opportunities for social interaction
- Use the progression of the seasons to highlight the traditional uses, current issues, and economic opportunities of natural resources
- View harvest in both the traditional ways practiced by the Ojibwe people and local more conventional agricultural harvest, and
- Incorporate Mind Body Training, Circle Keeping, and ACES practices within the community

It is through direct outreach that the Thirteen Moons program is able to fulfill their mission and achieve their goals. By coordinating regular workshops on traditional resource ecology and leadership development, Thirteen Moons shares Ojibwe culture with others fosters resiliency within the Fond du Lac community and beyond.

## Workshops and Events

- Snowshoes & Snow Snakes
- Sugarbush
- Manoomin (wild rice) Camp
- Wild foods sampling and harvesting
- Balsam Bough harvesting
- Gichi Manidoo Giizis pow wow
- Tamale and Tortilla Making Class
- Making Hominy

## Participants and Outreach

- The 2023 Gichi Manidoo Giizis Pow Wow had 350 registered dancers with over 3000 total people attending both Friday night session and Saturday session.
- Workshop/event participants: In 2023 we had 3500 participants in our workshops.





# Bimaaji'idiwin Gitigaan

# Producer Training Program

## Bimaaji'idiwin Ojibwe Garden Program

Translated from Ojibwe, Bimaaji'idiwin can be understood as "saving each other's lives," "giving life to one another," or "symbiosis," reflecting the reciprocal relationship between Anishinaabe and cultivated plants. The Ojibwe Garden Program attempts to do so through education, outreach, and preservation that promotes a balanced relationship with the earth and the things which we are provided.

An important aim of the demonstration garden is to develop, expand, and maintain a collection of Anishinaabe and Native American heirloom crop seeds through a miinikaaniwigamig or seed library. This is a point a point of connection between a growing network of dedicated seed savers and our local gardeners. The 2023 Bimaaji'idiwin Garden Program donated fresh produce to Fond du Lac Ojibwe School, community members, the Farm Feast and other outreach events. This year the program is a partner with the Fond du Lac Ojibwe School for Minnesota's "Harvest of the Month" Program. This program celebrates an in-season, locally-grown food item each month in the K-12 schools. This is one more way that we support healthy eating in the community.

## Workshops, Projects & Events

- Seed Starting and Garden Planning class
- Ag Business Plan Workshop
- Good Agricultural Practices Training
- Seed Starting Spring class
- Garden Tool Maintenance class
- Composting class
- The Principles of Soil Health class
- Nutrient Run off for Garden and Farm class
- Caring for fruit Trees and Shrubs class
- Tiller and walk behind hands on class
- Soil Health hands on demonstration and class
- Gitigaani-Wiikondiwag (Farm Feast)
- Rain Simulator and Soils demonstration
- Garlic Planting Demonstration
- Soil Test Demonstration
- Seed Saving class Demonstration

## Partnerships

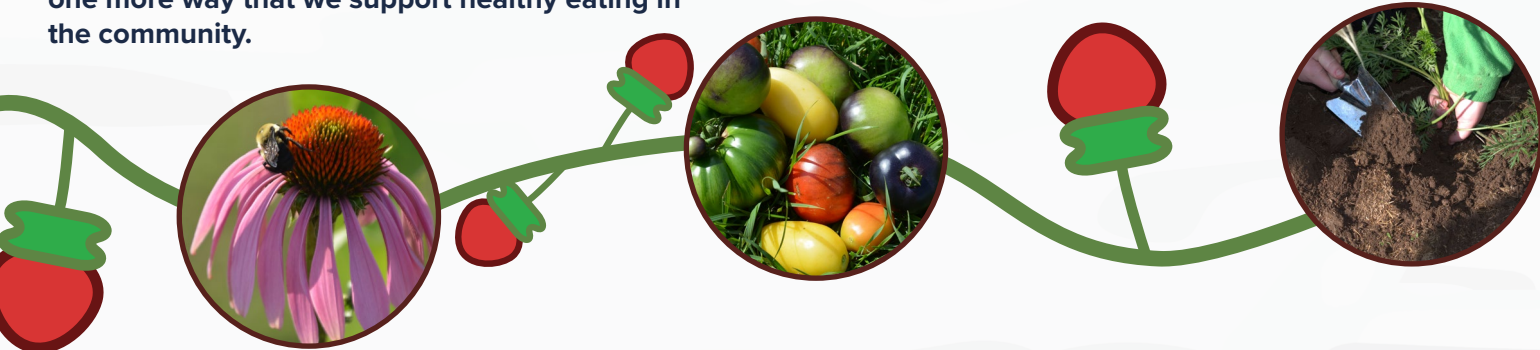
- Thirteen Moons Program
- Fond du Lac Resource Management Division
- Fond du Lac Agricultural Division
- Fond du Lac Ojibwe School
- Fond du Lac Planning Division
- Fond du Lac Gitigaan Program
- Big River Farms
- The Food Group
- NRCS and USDA

## Bimaaji'idiwin Producer Training Program

The program supports all people who desire to grow their own food or vegetable farming businesses by providing access to education, land, infrastructure, markets, resources, farmer connections and to help reach their goals. It builds relationships across generations and communities through collaboration with local youth and adult programs and connects producers with agricultural experts. During the 2023 growing season we had twenty producers at Gitigaaning and fourteen producers that had home gardens.

This year we sent producers to the Native American Nutrition Conference and the Emerging Farmers Conference. These conferences provide great opportunities for both learning and networking with other small farmers. In 2023 the Gitigaan Wiikondiwag (Farm Feast) was held. During the 3rd year of this event we had more than 100 attendees of all ages, from babies to elders, and had over 40 volunteers. These volunteers came from FDL programs, FDLTCC students, community members and visitors from the Twin Cities. The feast was prepared by Native chefs and youth. The produce, meat, value added products, and manoomin was all locally sourced and included produce from participants in the Producer Training Program. All ages joined together to play Traditional baaga'adowewin (lacrosse). We had ten informational tables from local, state and other organizations and 4 vendor tables from local producers. It was a great event on a hot summer day!

The Bimaaji'idiwin Garden Program and Producer Training Program is Thankful for all the support and volunteers from FDLTCC students, FDL Resource Management Indigenous GreenCorps, Farm Buds and community members. We are thankful for the gifts that the land provides. Nibagosendaamin ji-waabamigooyan iwidi Gitigaaning ani-ziigwang! Nimiigwechiwendaamin gakina gegoogaa-miinigoowiziyang.





# Gidakiimanaaniwigamig

# Serving Our Youth

## USDA APHIS: Agricultural and Natural Resources Knowledge Emersion Camp

The APHIS summer camp program builds career pathways in agriculture and natural resources for our youth. The series of two camps focuses on how these subjects connect to Ojibwe culture and heritage. The fundamentals of the camp incorporate scientific training in understanding the relationship of plants to the soil, air, water, and other organisms, with immersion in the fields of biology and environmental science.



- ### Partnerships
- Great Lakes Indian Fish and Wildlife Commission (GLIFWC)
  - Carlton School District
  - Lake Superior National Estuarine Research Reserve
  - 1854 Treaty Authority
  - Fond du Lac Resource Management
  - University of Minnesota, Twin Cities & Duluth
  - Fond du Lac Gitigaaning
  - 13 Moons



## Bimaaji'idiwin Sustainable Community Project - Children, Youth and Families at Risk (CYFAR) USDA Grant

Programming is centered around the concept of harvest, incorporating cultural values and traditions, food sovereignty, and seasonal activities. With an emphasis on empowering youth resiliency and teen leadership through three themes:

- Food Sovereignty
- Passing of Knowledge
- Leadership through connection with culture

Our Program Partners include the American Indian Community Housing Organization (AICHO), Carlton Indian Education, and FDL Gitigaaning Farm.

## Gidakiimanaaniwigamig Youth Programming

Gidakiimanaaniwigamig youth programming is focused on building skills, knowledge, and self-confidence by teaching about issues impacting tribal lands. Based in Anishinaabe values, history, and traditional knowledge. Gidakiimanaaniwigamig incorporates seasonal events with connection to current issues, and work being done by tribal, state, and federal agencies within the Ojibwe Ceded Territories.

By engaging Native youth in place-based STEAM education, emphasizing experiential placebased learning, TEK informed content, Native history and language, and culturally responsive pedagogy; our Gidakiimanaaniwigamig camps create a model that other communities can adapt. This immersive experience is supported by project team members, community Elders, and education mentors which can be replicated across all 11 Tribal communities within the Ojibwe Ceded Territories. It is our intention to continue supporting the development of young Ojibwe leaders.



**Joseph Bruce** is the new Youth Education Outreach Coordinator at the Environmental Institute. He is an enrolled member of the Fond du Lac Band of Lake Superior Chippewa. Joseph is a proud Fon du Lac Tribal and Community College Alumni and is continuing his education at the University of Minnesota Duluth – where he'll finish in Tribal Administration and Governance.

Joseph has a strong devotion to Anishinaabe culture, learning, and guiding Indigenous youth to develop and amplify their connections with the natural environment







## Increasing Community Research and Building Pathways for FDLTCC Students

The **USDA NIFA Area of Expertise Grant**, awarded to FDLTCC Environmental Institute in 2021, is in its final year of funding. This funding supports the expansion of research partnerships that give our students unique research experiences that create pathways into careers and higher educational opportunities. Through this funding, Environmental Institute work study students continued to assist with ongoing projects including the B4Warmed climate change project, wrapping up eDNA monitoring on tribal lands with a focus on streams this year, and the Snow Ex project. The **Tracking Mercury in the St. Louis River Watershed** is supported by a USDA NIFA Tribal Research grant and is exploring a new direction by focusing on comparing microbial communities in ditched peatland, wetland, and forested benthic ecosystems to understand how methylated mercury from these organisms affect bioaccumulation of mercury in odonates.



## FDLTCC Research Objectives

- Give students a hands-on opportunity to increase their skills, knowledge, and confidence in environmental science by conducting, analyzing, and reporting back on research that is critically important to Tribes and local agencies.
- Provide networking opportunities where students strengthen their connections with current research partners in the region to create opportunities beyond the scope of academia.
- Create sustainable student research pathways by increasing recruitment efforts and encourage a model of student-to-student mentoring and support.



**Steve Gebhard** is our new Science, Technology, Engineering and Math (STEM) Research Coordinator with the Environmental Institute. Steve earned his bachelor's degree in biology from UW-Superior and his master's degree in environmental education from the University of Minnesota - Duluth. Steve comes to the Environmental Institute with 10 years of experience in water-focused applied research including invasive species monitoring and management, fish passage assessment, macroinvertebrate and zooplankton sampling and taxonomy, and assessing ballast water on Great Lakes and ocean-going vessels. As the STEM Research Coordinator, Steve creates research pathways for students with local and regional research partners.

## Collaborative Research Projects

### Monitoring Wolf Pups on Tribal Lands

Fond du Lac Resource Management and the 1854 Treaty Authority have partnered with the Environmental Institute to provide the opportunity for FDLTCC students to assist with monitoring of collared wolf pups within the Fond du Lac reservation and ceded territory. The students were able to participate in den site visits, assisted in the collaring of the wolf pups, and have continued to use radio telemetry to increase the monitoring effort of these pups. This increased monitoring allows researchers from Resource Management and 1854 Treaty Authority to better understand the causes of wolf pup mortality.

### Monitoring Bilberry in the Superior National Forest

Environmental Institute students were able to participate in a weeklong bilberry monitoring effort with our partners from the Superior National Forest (SNF). The SNF is particularly interested in monitoring bilberry due to its essential role to the Northern Blue Butterfly, a species of special concern within the region. Students conducted monitoring surveys along transects in two subunits that recently had a prescribed burn to see how those efforts helped promote further bilberry growth.

### Using Manoomin Hulls as Mulch

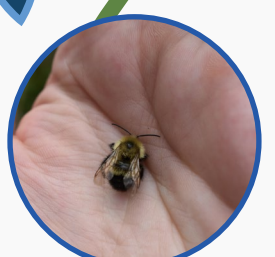
The Environmental Institute received funding in February 2023 for this project which seeks to evaluate the impacts of using manoomin hulls as mulch. To assess this, students and staff with the Environmental Institute will be monitoring soil moisture, soil health, and weed suppression. The project will be piloted in the high tunnel near the FDLTCC campus and will scale up to plots at the Gitigaaning farm in collaboration with producers enrolled in the Producer Trainer Program.

### Minnesota Bumble bee Atlas Program

Students with the Environmental Institute participated in bumble bee surveys in conjunction with the Minnesota Bumble bee Atlas through the University of Minnesota. Specifically, they were able to survey two sites within the Cloquet Forestry Center to compare the number and types of bumble bees between a recently burned and an unburned site.

## Partners

- 1854 Treaty Authority
- Cloquet Forestry Center
- Fond du Lac Resource Management
- NASA
- Superior National Forest
- Fond du Lac Department of Agriculture
- University of Minnesota – Duluth
- University of Minnesota – Twin Cities





# Sustainability at FDLTCC

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## USDA Education Equity Grant

### Annual Events

#### Sustainability Week

Each Fall Semester, FDLTCC puts on Sustainability Week to showcase current campus sustainability initiatives, FDLTCC's long-term sustainability goals, as well as local careers and trailblazing professionals working in related fields.

#### Bee Symposium

Our annual Bee Symposium in February brings people together from across the region to learn about beekeeping, native bees, pollinator conservation, and more.

#### Earth Week

Every April, FDLTCC Earth Week focuses on the promotion of current developments in local conservation practices, local artists and cultural knowledge keepers, as well as career opportunities in fields such as natural resource conservation, water quality, forestry, sustainability, education, public health, treaty law and tribal governance, and more.

### Garden and Forest Planning Committee

This year, a committee composed of FDLTCC students, faculty, staff, elders, and community stakeholders was assembled to discuss the growth and stewardship of our campus gardens and woodland spaces. Topics of focus include campus initiatives and infrastructure development related to Food Sovereignty, Traditional Anishinaabe Harvest and Foodways, sustainability, ecological restoration, regenerative agriculture, climate resiliency, community health, and more.

All are welcome! If you are interested in participating, please contact Kelsey Myhre at [kelsey.myhre@fdltcc.edu](mailto:kelsey.myhre@fdltcc.edu).

### 2023 Campus Infrastructure Developments

- Installation of campus Medicine Garden
- Completion of FDLTCC Outdoor Kitchen Classroom
- Campus trail building and maintenance
- Completion of campus High Tunnel
- Addition of 20 new raised garden beds
- Construction of campus composting system

### Sustainability Initiatives

#### Composting

This year, EI Work Study Students and members of FDLTCC Faculty and Staff have constructed and began utilizing a three-bin static composting system. The EI has also been collaborator with FDL Resource Management's Compost Planning Committee.

#### Recycling

EI Work Study Students maintain and carry out proper recycling procedures on campus.

#### Pollinator Habitat Improvement

Over the past year, over 15 different species of native forbs, grasses, and shrubs have been added to our campus garden spaces.

#### Rainwater Catchment and Irrigation

The Environmental Institute has installed rainwater catchment systems on two accessory structures on campus to irrigate portions of campus gardens. Other garden spaces are irrigated with passive, gravity-fed ceramic olla irrigation systems, or automated drip irrigation.



## Food Sovereignty

### Garden and Forest

The Environmental Institute currently tends a variety of garden spaces on campus, including vegetable beds, pollinator plantings, our campus Medicine Garden, and season extension structures. Forest resources like plant medicines, berries, bark, sap, and fungi are respectfully utilized through a variety of community learning opportunities as well as Indigenous seasonal harvest activities.

### Educational Outreach

The EI frequently offers workshops on Seed Starting, Food Safety, Good Agricultural Practices, Food Preservation, Composting, and Seed Saving. In addition to our campus gardens serving as experiential learning space, the completion of FDLTCC's Outdoor Kitchen Classroom has expanded our capacity for educational outreach and gathering community.

### Veggie Rx Program

This year, Fond du Lac Human Services, Fond du Lac Tribal and Community College, as well as partners at Fond du Lac Planning, Agriculture, and Resource Management Divisions, collaborated to pilot the Veggie Rx Program. Veggie Rx is a produce prescription box program focused on improving health outcomes of patients who are high-risk or currently experiencing diet-related chronic illness through nutrition education and improved access to fresh, locally grown or harvested, culturally appropriate foods.

Ten participants of the Mino Aya Win Clinic's Diabetes Prevention Program received one food box per month filled with fresh, local foods for July, August, and September, as well as nutrition education designed to support participants in preparing meals with the produce provided. This year, Fond du Lac Tribal and Community College donated over 200 lbs of fresh produce grown in the campus gardens to the Veggie R Program.

### FDL Food Sovereignty Committee

The Environmental Institute participates in the Fond du Lac Band's Food Sovereignty Committee, which meets every other week to discuss and collaborate on a variety of local food topics, including gardening, harvesting, food processing and preservation, cooking and nutrition education, higher education opportunities, grant writing, program development, and food policy work.



## Partners

- World Indigenous Nations Higher Education Consortium (WINHEC)
- USDA National Institute of Food and Agriculture (NIFA)
- USDA AMS Local Foods Purchasing Agreement (LFPA)
- US Department of Health and Human Services, Administration for Native Americans (ANA)
- Minnesota Department of Agriculture (MDA)
- Sustainable Agriculture Research and Education (SARE)
- Fond du Lac Agriculture Division
- Fond du Lac Resource Management Division
- Fond du Lac Planning Division
- Fond Du Lac Human Services
- Minnesota and Iowa Conservation Corps
- FDLTCC Sustainable Systems Track and Certificate



**Kelsey Myhre** is our new Sustainability Coordinator at the Environmental Institute. Kelsey attended the University of Iowa, where she earned a Bachelor's degree in Environmental Science and a Master of Arts in teaching in Secondary Science Education. In her new position, she looks forward to collaborating with students, faculty, staff, and community members to grow FDLTCC's Campus Gardens and Sustainability Initiatives.



# In Memory of Ron Willis

All of us at the Environmental Institute lost a good friend, colleague, and a piece of our heart in May 2023. Ron Willis was a passionate and caring youth coordinator but to those who knew him he was so much more. His heart was in everything he did and he always showed compassion for everyone from our youth campers to our college students. We will miss his smile, his huge laugh, and the fun we had together. Giga-waabamin miinawaa



# Contact Us!

Facebook: Look for us at Environmental Institute at Fond du Lac Tribal and Community College

Facebook.com/Environmental.Institute.FDLTCC

Facebook.com/13Moons.Ashiniswi.giizisooog



## Upcoming Events

### September

Manoomin (wild rice ) Camp

### October

FDLTCC Sustainability Week

### November

13 Moons Cultural Conference

### January

Gichi Manidoo Giizis Pow Wow

### February

9th Annual Bee Symposium

### April

Sugar Bush Camp  
Earth Week  
Research Symposium

### August

Gitigaan Wiikondiwag



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