



Technical Note No. 8, November 2023

## Experimental Forests Technical Notes

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# University of Minnesota Experimental Forests project activity summary for 2022

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### Background on project records database

This report is intended to provide an end-of-year status update for the project record database. The project record database tracks projects that happen at one or more of the University of Minnesota (UMN) Experimental Forest properties<sup>3</sup>. Sites in the Experimental Forest network include the Cloquet Forestry Center (CFC), the Hubachek Wilderness Research Center (HWRC), the Allred property, and the Boone property. Sites are stewarded by the Forest Management and Research (FMR) team.

All Projects that rely on the forested landbase or data generated from the landbase are tracked as part of the FMR UMN Experimental Forests Project Record data management system. Activities that only rely on buildings, such as meetings or lodging, are not tracked in the Project Record data system.

There are three components to the project records data management system: the project record hierarchical folder system, the project records GIS layer, and the project records list mainfile excel spreadsheet. All of these are internal record keeping that are stored and archived in the UMN Active Directory (aka G-Drive). The folder system maintains any documents, pdf maps, or other materials created or used for project support are stored, the GIS layer tracks the geographic extent of projects, if applicable, and the mainfile contains project attributes (e.g. principal investigator, project contact information, status and purpose, etc.) for each project. This update refers primarily to the project records list mainfile and the status of each project.

A project's primary purpose is listed as one of five categories:

- Research,
- Teaching/Education/Outreach
- Demonstration/Case Study/Monitoring
- Management
- Other.

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<sup>3</sup> Gill, Kyle G; Johnson, Lane B; Olesiak, Rachael A; Prange, Rebecca J; David, Andrew J. (2019). Defining the University of Minnesota Experimental Forests Landbase. Retrieved from the University of Minnesota Digital Conservancy, <https://hdl.handle.net/11299/209141>. Last accessed April 7, 2022

See the project tracking procedure, project proposal form, and proposal form metadata document<sup>4</sup> for in-depth category definitions and other details that are tracked on the project record form.

Project status is categorized in the mainfile as one of seven categories:

- Inactive or never started
- Active
- Long-term
- Unknown
- Proposed
- Continued as new project
- Complete

See Gill 2022<sup>5</sup> for additional details on project status categories. The status of an individual project is updated at the end of each year through a Google Form-based annual project record check-in survey or through direct communication with a project's contact, leader, and/or principal investigator.

### **Year-end projects check-in for 2022**

A total of 105 projects were included in the 2022 year-end projects check-in list with 62 unique project leaders. Projects were initially included if they were known to have potential activity during 2022; activity could include field work, labwork, or data analysis, and/or writing/reporting. This was the total across all sites and project purposes (see Table 1). Prior to the year-end update, 93 were categorized as "Active", five were categorized as "Long-term", two were categorized as "Proposed", and five were already categorized as "Complete;" the projects known to be complete prior to the check-in were one-day teaching projects. One "Proposed" project was approved in 2021 for installation in 2022 but ran into technical issues prior to installation so was never installed. The other was a fuels reduction project at HWRC that relies on a collaborator who was still working out the level of involvement they might have. Both of these proposed projects have been excluded from summary numbers highlighted below.

### **Check-in Results**

A total of 87 projects had their status updated through the google form-based project check-in process. Eight projects were confirmed complete through google form responses. The remaining 79 projects still had field, lab, or analysis and writing to complete on their project. See Table 2 for a summary of the number of projects in each status.

Of the 103 projects that had activity in 2022, 11 had a year-end status of Complete, 87 a status of Active, and 5 a status of Long-term.

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<sup>4</sup>Gill, Kyle G. (2022). Experimental Forests project proposal and record form metadata. Retrieved from the University of Minnesota Digital Conservancy, <https://hdl.handle.net/11299/225845>. Last accessed November 28, 2022

<sup>5</sup> Gill, Kyle G. (2022). University of Minnesota Experimental Forests project activity summary for 2021. Retrieved from the University of Minnesota Digital Conservancy, <https://hdl.handle.net/11299/250017>.

Table 1. A summary of projects included in the 2022 year-end check-in by their primary purpose and site(s). Note that numbers for individual CFC and HWRC columns do NOT include projects that occur at both sites; these are counted in the CFC & HWRC column. Purpose "TEO" is Teaching/Education/Outreach and "DCSM" is Demonstration/Case Study/Monitoring. The two projects that were listed as "Proposed" are excluded from this table.

Purpose	Boone	CFC	CFC & HWRC	HWRC	Grand Total
Research	1	36	5	2	44
TEO		17		1	18
DCSM		23	1	2	26
Management		5	1	1	7
Other		7		1	8
<i>Total</i>	1	88	7	7	103

Table 2. Count of project status update responses through the Annual Project Record Check-in. n = 87

Response	Project complete?	Fieldwork complete?	Labwork complete?	Analysis & writing complete?
Yes	8	18	14	6
No	79	54	18	47
Not applicable	0	15	55	34

### New projects in 2022

In 2022, 18 new projects were accessioned to the records. Seventeen projects were approved and initiated; one remained in a proposal and planning status so was not included in the year-end check in. Five of the new projects were categorized as Research, all at CFC. Four new projects were categorized as Other, including the one new project at HWRC. See Table 3 for details of new projects by site and primary purpose.

Table 3. A summary of 17 new projects initiated in 2022 across the Experimental Forests properties by project purpose and site. Purpose "TEO" is Teaching/Education/Outreach and "DCSM" is Demonstration/Case Study/Monitoring.

Site	Research	TEO	DCSM	Management	Other	<i>Total</i>
CFC	5	6	1	1	3	16
HWRC	0	0	0	0	1	1
<i>Total</i>	5	6	1	1	4	17

Project primary purposes of the 103 projects ranged across our categories and were located at three of four experimental forests sites. Forty-four projects were categorized as Research for their primary project purpose, 18 as Teaching/Education/Outreach, 26 as Demonstration/Case Study/Monitoring, seven as Management, and eight as Other. A majority of projects were located at the Cloquet Forestry Center (CFC) but also occurred at the Hubachek Wilderness Research Center (HWRC), the Boone property, and at a combination of CFC and HWRC (see Table 4).

Table 4. Count of projects by primary purpose and site where they occurred. Purpose "TEO" is Teaching/Education/Outreach and "DCSM" is Demonstration/Case Study/Monitoring. Note that numbers for CFC and HWRC do not include projects that occur at both sites.

Project Purpose	Boone	CFC	HWRC	CFC & HWRC	Total
Research	1	36	2	5	44
TEO		17	1		18
DCSM		23	2	1	26
Management		5	1	1	7
Other		7	1		8
Total	1	89	8	7	103

A full list of the 103 project records with activity during 2022 with their project leader and/or contact, purpose, and year-end status is included in Table 5 below.

### Experimental Forests publications database

The Experimental Forests Zotero publication database<sup>6</sup> contains references to all known publications and reports generated from projects conducted over the history of the Experimental Forests. New references generated in the past year are requested to be reported during the annual project record check-in. Project leaders share the reference or the DOI link and FMR staff or UMN library staff update the publications database.

### Acknowledgements

Thank you to everyone who uses the Experimental Forests for their research, teaching, and learning!

In-person and virtual support for the work of the listed projects is provided primarily by the FMR group, which consists of Kyle Gill, Lane Johnson and Rachael Olesiak, and Beckie Prange, Assistant Scientist and Site Manager at HWRC. All of our work is conducted under the direction of Andrew David, CFC & HWRC Director of Operations.

Thank you to Lane Johnson and Beckie Prange for their contributions to project management and support across the Experimental Forests network.

<sup>6</sup> UMN Experimental Forests Publications Database. [https://www.zotero.org/groups/4481352/university\\_of\\_minnesota\\_experimental\\_forests/library](https://www.zotero.org/groups/4481352/university_of_minnesota_experimental_forests/library). Last accessed November 9, 2023.

Table 5. List of 105 projects that had activity during 2022. Purpose categories are as follows: 1 - Research, 2 - Teaching/Education/Outreach, 3 - Demonstration/Case Study/Monitoring, 4 - Management, 5 - Other. Status\_pre and Status\_post are before and after the year-end update. Status categories are as follows: 1 - Active, 2 - Long-term, 6 - Complete; 3 - unknown, 4 - proposed, and 5 - continued as new ID are not included here.

Project_ID	Project title	PI/Leader	PI_Affiliation	Contact	Purpose	Status_pre	Status_post	Site
2022_18	Bobcat and fisher habitat use and interactions	Michael Joyce	UMD - NRRRI	Michael Joyce	1	1	1	CFC
2022_17	Chainsaw safety training 2022	Lane Johnson	UMN CFC, UMN HWRC	Lane Johnson	2	6	6	CFC
2022_16	People, Pines, and Fire; UMN Honors seminar 3071	Kurt Kipfmueller	UMN Geography	Kurt Kipfmueller	2	6	6	CFC
2022_15	Minnesota Master Naturalist ecology workshop	Andrea Lorek-Strauss	UMN Extension	Andrea Lorek-Strauss	2	6	6	CFC
2022_14	Wool-based herbivory protection	Rachael Olesiak	UMN - CFC	Rachael Olesiak	2	1	1	CFC
2022_13	CFANS-HWRC Network Upgrade	Andrew David	UMN CFC, UMN HWRC, UMN NCROC, UMN FR	Beckie Prange	5	1	1	HWRC
2022_11	Development of a genetic test for accurate identification of native American highbush cranberry	Alan Smith	UMN - Dept of Horticultural Science	David Tork	1	1	1	CFC
2022_10	Using LiDAR to detect stems in historical provenance plantings in Minnesota	Songlin Fei	Purdue University - Dept of Forestry and Natural Resources	Rebekah Shupe	1	1	1	CFC
2022_09	Effect of fire on soil organic matter and community of soil transforming invertebrates	Miloslav Devetter	Biology Center CAS, Institute of Soil Biology	Lee Frelich	1	1	1	CFC
2022_08	Cloquet Forestry Center timber sale revenue totals from 1911-2020	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	5	1	1	CFC
2022_07	Northern Goshawk territory monitoring data analysis project	Gaea Crozier	MN DNR	Gaea Crozier	1	1	1	CFC
2022_06	Pipeline burn unit preparation through timber sale	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	4	1	1	CFC
2022_05	Guided bird walk	Keiko Satomi	Cloquet Public Library	Keiko Satomi	2	6	6	CFC

Project_ID	Project title	PI/Leader	PI_Affiliation	Contact	Purpose	Status pre	Status post	Site
2022_04	EarthSounds: Ruffed Grouse	Tom Packer	Offspring Films Ltd	Tom Packer	5	1	1	CFC
2022_03	A history and obituary for red pine number three	Lane Johnson	UMN CFC, UMN HWRC	Kyle Gill	3	1	6	CFC
2022_02	Arborglyph tree: investigation of history and transfer to FDL	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	5	1	6	CFC
2022_01	Carlton County SWCD public demonstration for creating biochar	Sam Horner	Carlton County SWCD	Sam Horner	2	6	6	CFC
2021_22	Genetics of eastern hemlock	Andrew David	UMN CFC, UMN HWRC, UMN NCROC, UMN FR	Andrew David	1	1	1	CFC
2021_18	Forest Assisted Migration Project red and white pine cone collection	Julie Etterson	UM-Duluth Biology	Ryan Sullivan	3	1	1	CFC
2021_17	FNRM 2104 Measuring Forest Resources	Chris Edgar	UMN - FR	Chris Edgar	2	1	1	CFC
2021_15	eROC Mesonet	Brian Buhr	UMN CFANS	Ann Piotrowski	1	1	1	CFC; HWRC
2021_14	FNRM 1001 Orientation and Information Systems field tour at CFC	Mike Kilgore	UMN - FR	Mike Kilgore	2	1	1	CFC
2021_13	Cloquet Forestry Center and Hubachek Wilderness Research Center non-native plant species identification and treatments	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	4	1	1	CFC; HWRC
2021_11	Youth field trips	Rachael Olesiak	UMN - CFC	Rachael Olesiak	2	1	1	CFC
2021_09	FNRM 4521 Field timber harvesting and road planning	Charlie Blinn	University of Minnesota	Charlie Blinn	2	1	1	CFC
2021_08	FNRM 4511 Field Silviculture	Marcella Windmuller-Campione	UMN - FR	Marcella Windmuller-Campione	2	1	1	CFC
2021_07	Fond du Lac pipeline corridor water quality monitoring	Cristina Weske	Fond du Lac Band of Lake Superior Chippewa	Cristina Weske	3	1	1	CFC
2021_06	Long-term monitoring of black ash	Andrew David	UMN CFC, UMN	Andrew David	3	1	1	HWRC

Project_ID	Project title	PI/Leader	PI_Affiliation	Contact	Purpose	Status pre	Status post	Site
	stands at HWRC		HWRC, UMN NCROC, UMN FR					
2021_04	Variable density thinning in the Conservation Education Days stand	Kyle Gill	UMN CFC, UMN HWRC	Rachael Olesiak	4	1	1	CFC
2021_03	FNRM 2101 Identifying Forest Plants	Andrew David	UMN CFC, UMN HWRC, UMN NCROC, UMN FR	Andrew David	2	1	1	CFC
2021_02	Microbial dimensions in Minnesota: The role of symbiotic microbes in the invasion process of red turpentine beetle	Robert A. Blanchette	UMN - Plant Pathology	Andrew Mann	1	1	1	CFC
2021_01	MN DNR Forestry LIDAR Plot Based Inventory	Nikki Nutzhorn	MN DNR Forestry Resource Assessment	Jason Langenecker	3	1	1	CFC
2020_13	Continuous Forest Inventory (CFI) plot checks, maintenance, and spruce budworm impact assessment	Beckie Prange	UMN - HWRC	Beckie Prange	2	1	1	HWRC
2020_12	Spruce budworm and firewise balsam mitigation and thinning	Matt Fetterer	UMN - HWRC	Matt Fetterer	4	1	1	HWRC
2020_11	Deadwood decomposition observation point	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	3	1	1	CFC
2020_10	Contrasting hydroclimate responses of upland and lowland conifers using dendrochronology	Mara McPartland	UMN - Geography	Mara McPartland	1	1	1	CFC
2020_09	Great Lakes Design Lab Old growth canopy trail and local fiberhed deer fencing	Karen Lutsky	UMN - Landscape Architecture	Karen Lutsky	1	1	1	CFC
2020_08	Bark beetle sampling in Minnesota	Brian Aukema	UMN - Entomology	Brian Aukema	1	1	1	CFC
2020_07	Vegetation remeasurement twenty years following harvest	R. Lane Moser	UMN - SFEC	R. Lane Moser	1	1	1	Boone
2020_04	Assessment of atmospheric deposition of nutrients in Minnesota	Paulo Pagliari	UMN - SWROC	Paulo Pagliari	1	1	6	CFC
2020_03	Pesky Plants - Phenology of non-native weeds, common gardens	Rebecca Montgomery	UMN - FR	Abbie Anderson	1	1	1	CFC

Project_ID	Project title	PI/Leader	PI_Affiliation	Contact	Purpose	Status pre	Status post	Site
2019_28	Ruffed grouse habitat usage before and after a grouse-specific silvicultural treatment.	Rachael Olesiak	UMN - CFC	Rachael Olesiak	3	1	1	CFC
2019_27	CFC Open House	Rachael Olesiak	UMN - CFC	Rachael Olesiak	2	1	1	CFC
2019_26	Velvet longhorned beetle ( <i>Trichoferus campestris</i> ) early reproductive ecology and host preference	Brian Aukema	UMN - Entomology	Grace Haynes	1	1	6	CFC
2019_24	Conservation Education Days for Carlton County's 5th Graders	Rachael Olesiak	UMN - CFC	Rachael Olesiak	2	2	2	CFC
2019_22	Wall Upgrades for Deep Residential Energy Renovation	Patrick Huelman	UMN - BBE (ret.)	Garrett Mosiman	1	1	6	CFC
2019_21	Advancement of biochar for forest health	Rob Slesak	US Forest Service	Alan Toczydlowski	1	1	1	CFC
2019_20	Ash endophytes for biocontrol of the Emerald Ash Borer	Kathryn Bushley	UMN - Plant Pathology	Andrew Mann	1	1	1	CFC
2019_18	Effects of climate change on <i>E. maimiaga</i> induced mortality along the gypsy moth's range front	Clare Rodenberg	University of Virginia	Clare Rodenberg	1	1	1	HWRC
2019_17	Stand inventories data collection for 2019 GIS layers update, including regeneration checks	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	4	1	1	CFC
2019_16	Unmanned aircraft systems aerial data collection	Dan Heins	UMN - FR	Dan Heins	1	1	1	CFC; HWRC
2019_11	Respectful wildlife carcass disposal	Mike Schrage	Fond du Lac Res. Mgmt Div.	Mike Schrage	5	1	1	CFC
2019_08	Cloquet Forestry Center Prescribed Fire Collaborative	Lane Johnson	UMN CFC, UMN HWRC	Lane Johnson	4	1	1	CFC
2019_07	Cloquet Forestry Center Historical Photos and Maps Digitization	Lane Johnson	UMN CFC, UMN HWRC	Lane Johnson	5	1	1	CFC
2019_06	Evaluating artificial den boxes as a habitat management tool for fishers and other wildlife	Michael Joyce	UMD - NRRI	Michael Joyce	1	1	1	CFC; HWRC



Project_ID	Project title	PI/Leader	PI_Affiliation	Contact	Purpose	Status pre	Status post	Site
2019_04	Wood Duck House Monitoring	Rachael Olesiak	Fond du Lac Tribal and Community College	Rachael Olesiak	2	1	1	CFC
2019_03	The role of life histories in determining the rates and fates for wood carbon during fungal decomposition	Jonathan S. Schilling	UMN Dept. of Evolution, Ecology, Behavior	Jonathan Schilling	1	1	1	CFC
2019_02	Cloquet Forestry Center digital database of publications and reports	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	5	1	6	CFC
2019_01	Life-Cycle Assessment of Biochar in Agricultural and Forest Ecosystems: Effects on Production, Soil Fertility, and Economic Impact	Marcella Windmuller-Campione	UMN - FR	Marcella Windmueller-Campione	1	1	1	CFC
2018_23	Herbivory Protection	Rachael Olesiak	UMN - CFC	Rachael Olesiak	4	1	1	CFC
2018_22	Summer Forestry Adventure Days	Rachael Olesiak	UMN - CFC	Rachael Olesiak	2	1	1	CFC
2018_21	Taking care of the land and community traditional pow wow	Rachael Olesiak	UMN - CFC	Rachael Olesiak	5	1	1	CFC
2018_20	Spring Forestry Adventures Day	Rachael Olesiak	UMN - CFC	Rachael Olesiak	2	1	1	CFC
2018_18	Camp 8 Old-Growth Growth and Structure Plots	Kyle Gill	UMN CFC, UMN HWRC	Lane Johnson	3	1	1	CFC
2018_17	Screening of antagonistic fungi against Heterobasidion irregulare	Eric Otto	MN DNR Forest Health	Eric Otto	1	1	1	CFC
2018_16	Minnesota MycoFlora (MNMF) Project	Anna Gerenday	UMN - Bell Museum, Minnesota Mychology Association	Anna Gerenday	3	1	1	HWRC
2018_15	Assessing the ecosystem services provided by lichens and mosses	Daniel Stanton	UMN Dept. of Evolution, Ecology, Behavior	Daniel Stanton	1	1	1	CFC; HWRC
2018_12	Monitoring Avian Productivity and Survivorship (MAPS): A cooperation with the Institute for Bird Populations	Dave Grosshuesch	Superior National Forest	Dave Grosshuesch	1	1	1	HWRC
2018_11	Predicting long-term growth of novel red pine and white spruce plantings using micro plots	Matthew Russell	Arbor Analytics	Matt Russell	1	1	1	CFC

Project_ID	Project title	PI/Leader	PI_Affiliation	Contact	Purpose	Status pre	Status post	Site
2018_09	The effects of biochar broadcast application on FDn33 native plant communities following clearcut.	Marcella Windmuller-Campione	UMN - FR	Marcella Windmueller-Campione	1	1	1	CFC
2018_06	Otter Creek Minnow Project	Rachael Olesiak	UMN - CFC	Rachael Olesiak	3	1	1	CFC
2018_04	People, Fire, Pines in the Border Lakes Region of North America	Evan Larson	UW - Platteville	Evan Larson	1	1	1	CFC
2018_02	Monitoring goshawk territories	Gaea Crozier	MN DNR	Gaea Crozier	3	1	1	CFC
2017_09	Cambium phenology of red pine	Dan Griffin	UMN Geography	Dan Griffin	1	1	1	CFC
2017_05	Native Plant Community mapping of CFC and HWRC	Kyle Gill (Liam Gilson)	UMN CFC, UMN HWRC	Kyle Gill	3	1	1	CFC; HWRC
2017_04	Impacts of biochar on summer survival and growth of jack pine seedlings	Marcella Windmuller-Campione	UMN - FR	Marcella Windmuller-Campione	1	1	1	CFC
2017_03	Northern Minnesota Deer Browse Exclosure Size and Shape Study	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	3	1	1	CFC
2017_02	Boreal Forest Warming at an Ecotone in Danger - Third iteration	Peter Reich	UMN - FR	Artur Stefanski	1	1	1	CFC; HWRC
2016_26	Red pine strip seedtree silvicultural system	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	3	1	1	CFC
2016_25	Stand 57 Forest Adaptation Demonstration Site	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	3	1	1	CFC
2016_24	Fisher Management Zone	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	3	1	1	CFC
2016_22	Nursery versus woodsrun white pine browse by whitetailed deer	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	3	1	1	CFC
2016_16	Chaga inoculation	Robert A. Blanchette	UMN - Plant Pathology	Bob Blanchette	1	1	1	CFC
2016_13	Fire history and age structure of old growth red pine stands at the Cloquet Forestry Center	Evan Larson	UW - Platteville	Evan Larson	1	1	1	CFC
2016_07	Pollinator Garden	Rachael Olesiak	UMN - CFC	Rachael Olesiak	3	1	1	CFC
2016_06	Cover it up! Using plants to control Buckthorn	Mike Schuster	UMN - FR	Peter Wragg	1	1	1	CFC

Project_ID	Project title	PI/Leader	PI_Affiliation	Contact	Purpose	Status pre	Status post	Site
2016_05	Native plant seed collection for propagation and restoration	Kyle Gill	UMN CFC, UMN HWRC	Kyle Gill	3	1	1	CFC
2015_18	Fond du Lac Band of Lake Superior Chippewa wolf population monitoring	Mike Schrage	Fond du Lac Res. Mgmt Div.	Mike Schrage	3	1	1	CFC
2015_17	Enhancing future conservation using Gullion's historical research	Kent Montgomery	Central Lakes College	Kent Montgomery	1	1	1	CFC
2015_15	Impact of future changes in winter conditions on the environment below the snow pack	Jonathan N. Pauli	University of Wisconsin Madison	Kim Thompson	1	1	1	CFC
2015_13	Variation in early-season phenology among diverse seed sources of white spruce	Carrie Pike	US Forest Service	Carrie Pike	1	1	1	CFC
2015_12	Intraspecific assisted migration of white spruce in an aspen mixedwood silvicultural system	Mike Reinikainen	MN DNR Silviculture	Kyle Gill	3	1	1	CFC
2015_05	Student jack pine pre-commercial thinning trials	Mike Reinikainen	MN DNR Silviculture	Kyle Gill	1	1	1	CFC
2015_04	Adaptation strategies informed by the re-measurement of long-term historical provenance (255-series) of jack pine ( <i>Pinus banksiana</i> )	Pengxin Lu	Natural Resources Canada	Pinxang Lu	1	1	1	CFC
2015_02	Individual and population patterns of seed production by white spruce ( <i>Picea glauca</i> ).	Jalene LaMontagne	DePaul University Dept of Biological Sciences	Jalene LaMontagne	1	1	1	CFC
2014_05	Growth and survival comparison of seedlings grown in a gravel bed for 3 months and trees planted directly in the field	Rachael Olesiak	UMN - CFC	Rachael Olesiak	3	1	1	CFC
2012_08	Fond du Lac Band of Lake Superior Chippewa Mercury Monitoring Study	Wayne Dupius	Fond du Lac band of Lake Superior Chippewa	Wayne Dupius	3	1	1	CFC
2012_03	Hardwood demonstration	Carrie Pike	US Forest Service	Kyle Gill	3	1	1	CFC
2010_01	IDENT: International Diversity	Peter Reich	UMN - FR	Artur Stefanski	1	1	1	CFC

Project_ID	Project title	PI/Leader	PI_Affiliation	Contact	Purpose	Status pre	Status post	Site
	Experiment Network with Trees							
1991_03	CFC White pine breeding orchard	Andrew David	UMN CFC, UMN HWRC, UMN NCROC, UMN FR	Andrew David	1	2	2	CFC
1989_96	White birch regeneration following several cutting/site preparation practices	Kyle Gill; Al Alm	UMN CFC, UMN HWRC	Kyle Gill	1	2	2	CFC
1913_05	Arboretum	Kyle Gill	UMN CFC, UMN HWRC	Rachael Olesiak	3	2	2	CFC
1911_01	CFC NOAA Weather Station	Kyle Gill	UMN CFC, UMN HWRC	Rachael Olesiak	3	2	2	CFC