State Forest Nursery Program Fiscal Year 2022 Legislative Report

06/21/2023

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As requested by Minnesota Statute 3.197: This report cost approximately $1,150 to prepare, including staff time, printing, and mailing expenses.

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Statutory Reference

Minnesota Statutes, section 89.36

PRODUCING AND PROCURING PLANTING STOCK

Subd. 4. **Annual report.** The commissioner (of natural resources) shall submit an annual report to the legislature relating to the production of planting stock at state nurseries. The report must include the following: sale figures; income figures; and expenses for operations and administration.

Minnesota Statutes, section 3.197

Required Reports

A report to the legislature must contain, at the beginning of the report, the cost of preparing the report, including any costs incurred by another agency or another level of government.

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Executive Summary

The Minnesota State Forest Nursery, located ten miles south of Akeley in the Badoura State Forest, grows conifer and hardwood seedlings for reforestation on public and private lands. It is currently the only large-scale Minnesota nursery for native, conservation-grade conifer and hardwood seedlings. Primarily supported by seedling sales, the nursery is known for seed sourcing controls, seed extraction and cleaning, and tree cultivation that creates high-quality seeds and seedlings to support public and private reforestation efforts.

The nursery sold 3.1 million conifer, hardwood, and hardwood shrub seedlings during FY2022. Of those, 41 percent went to public land reforestation efforts and 59 percent went to private land reforestation. Sales of those were consistent with the most recent 5-year average excluding the FY2020 COVID-19 year. FY2022 receipts for seedling sales were $1,091,902, direct seed sales for aerial seeding and delivering to contract growers totaled $137,170, and interest and cash overages equaled $1,934. This results in total nursery receipts of $1,231,006 in FY2022; total expenses were $1,348,695. More information about overall FY2022 revenues and expenses can be found in Appendix 1.

The FY2022 year-end fund balance in the Minnesota State Forest Nursery Account was $497,007. Rebuilding the nursery dedicated fund balance to $1.5 million is needed. The fund is important for withstanding unforeseen agricultural disruptions that may occur in any given fiscal year. These can include adverse weather events, crop disease, or a pandemic. For example, the State Forest Nursery Account experienced a $919,048 net loss in FY2020 due to impacts of the COVID-19 pandemic.

While FY2022 saw a slight increase in seedling sales from the previous year, revenue proceeds decreased by $262,000. The reduction was due in part to a lack of available transplant seedlings and state aerial seed sales. Transplants are a larger, higher-priced tree seedling desired by private landowners and they take three years to produce. This reduction was one of the lingering effects from the COVID-19 labor shortage.

Seedling prices remained the same in FY2022 as in FY2021. The Minnesota Department of Natural Resources (DNR) completed a pricing analysis in FY2022 and adjusted pricing upward in FY2023 for some species. Increases are intended to account for the effects of increased demand and inflationary pressure on materials (e.g., source seed, fertilizer, packaging, pesticides, etc.) and labor costs.

The DNR is in the process of increasing production at the nursery within the statutory limitation of 10 million tree seedlings per year. This is partially supported by 2021 legislation that provided $1.25 million each year in FY2022 and FY2023 for "*accelerated tree planting and increasing seed collection and conservation-grade tree seedling production at the state forest nursery and providing cost-share incentives to increase planting*".[1]

Climate change mitigation and adaptation will continue to drive demand for increased seedling production and seed sourcing for reforestation and afforestation. Carbon sequestration, water quality, wildlife, and the forest products industry all depend on healthy forests. New capital investments are needed to ensure the nursery can

[1] Laws of Minnesota, 2021, 1st Special Session, Chapter 6, Subdivision 4(i).

effectively sustain its long-term role in meeting Minnesota's current and future reforestation needs. The 2023 capital investment budget passed by the Minnesota Legislature and signed by Governor Walz includes funding for the DNR to modernize seed extraction, seedling storage facilities, and processing capacity at the State Forest Nursery. Additional information about specific challenges, opportunities, and additional modernization needs – including the need to add capacity to grow plug seedlings – is included in this report.

Introduction – State Forest Nursery Program, Division of Forestry

The Minnesota State Forest Nursery began producing conservation-grade seedlings for reforestation in the early 1930s. To date, more than one billion seedlings from the nursery have been planted on public and private lands.

Minnesota Statutes, section 89.36, authorizes the nursery to produce, exchange, or purchase up to 10 million seedlings each year. Cones and seed, purchased from private pickers, are prepped and cleaned for aerial seeding or planting to grow seedlings. After two or three years of growing, seedlings are lifted from the field and shipped to final planting or reforestation sites across Minnesota. To supplement nursery operations, each year 100,000 to one million seedlings are purchased from private producers for resale.

Seedlings purchased from the nursery must be used to establish or reforest harvested lands, wood lots, windbreaks, and shelterbelts or for erosion control, soil and water conservation, environmental education, or permanent food and cover for wildlife. Conservation-grade seedlings grown at the nursery differ from landscape-grade seedlings produced in many private nurseries. Conservation-grade seedlings are smaller (5-12 inches long), which makes them easier to plant in large quantities. They are also produced from seed collected in Minnesota, thereby helping to preserve and promote local genetic diversity and ensure the trees will grow where they are planted. The nursery grows conifer and hardwood tree species, as well as some shrubs, for these purposes.




State Forest Nursery Mission Statement

Our mission is to produce bare-root seedlings that are Minnesota-hardy, high quality, and reasonably priced for public and private landowners. We are dedicated to helping protect the sustainability of Minnesota's diverse forest resources and continuing our state's proud tree planting heritage.

Sales and Production Summary, Fiscal Year 2022

In FY2022, the nursery shipped 3,062,370 tree and shrub seedlings. Of these, the nursery produced 2,837,070 seedlings and 225,300 seedlings were purchased from licensed private producers or obtained via trades with other state or federal government nurseries (Figure 1). Public lands received about 41 percent and private lands received 59 percent of the seedlings (Figure 2).

The nursery grows and sells three types of seedlings: conifer, hardwood, and shrub species. Most trees grown and sold are conifers (Figure 3). Shrubs are sold in much smaller quantities, primarily to private landowners.

Shrubs include dogwood, wild plum, chokecherry, and other woody plants. These varieties are often sold in mixed packets to landowners for wildlife habitat. Table 1 contains a complete list of seedlings sold in FY2022. The revenue generated by seedling sales at the nursery in FY2022 was $1,091,902. Total revenue at the nursery, including seed sales, for FY2022 was $1,231,006. A breakdown of revenue sources is included in Appendix 1. A description of accounts receivables is included in Appendix 2.

Figure 1: FY2022 Seedling Sources

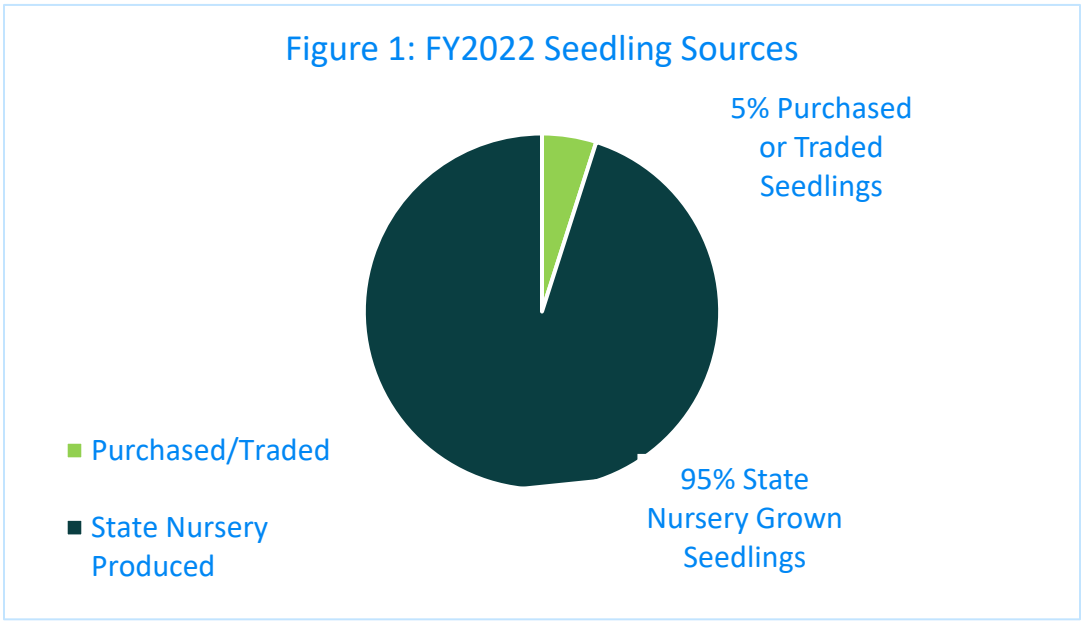


Figure 2: FY2022 Seedling Distribution

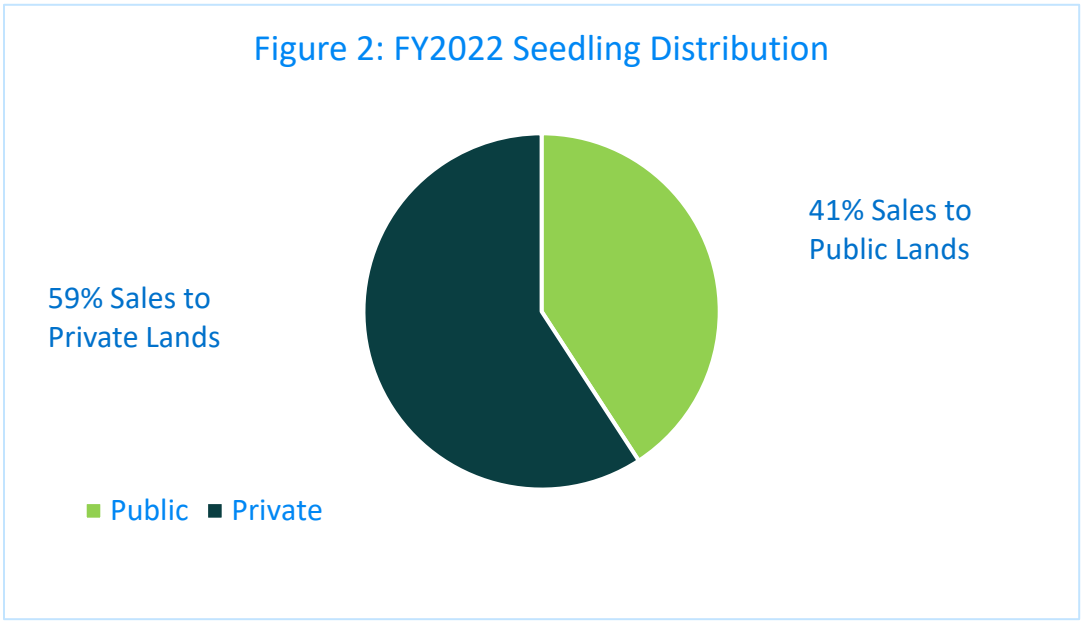


Figure 3: FY2022 Seedling Sales by Types

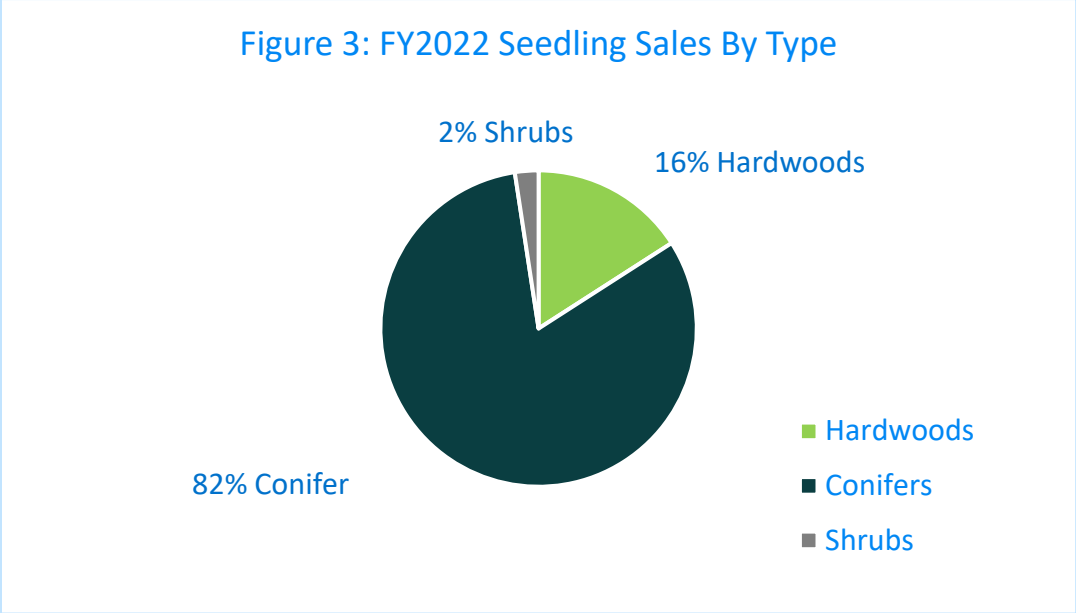


Table 1: FY2022 Seedling Sales by Species and Producer

Product	State-produced Seedlings	Purchased/Traded Seedlings	Total Seedlings Shipped
Chokecherry		17,500	17,500
Juneberry		17,500	17,500
Wild plum		17,500	17,500
Hackberry		700	700
Red osier dogwood		17,500	17,500
Black cherry		3,500	3,500
Red pine seedlings	1,208,350		1,208,350
Jack pine seedlings	121,380	93,300	214,680
White pine seedlings	366,040	4,000	370,040
White spruce seedlings	701,500		701,500
Black spruce seedlings		1,000	1,000
Black Walnut		47,500	47,500
Bur oak	45,100		45,100
Silver maple	70,000		70,000
White oak	27,400		27,400
Red oak	262,900		262,900
River Birch		700	700
Swamp white oak	34,400		34,400
White cedar		4,600	4,600
Totals	**2,837,070**	**225,300**	**3,062,370**

In FY2022, expenses totaled $1,348,696. Of this, $732,423 were payroll expenses and $616,273 were nonpayroll expenses (Table 2). Encumbrances remaining to be paid in FY2023 were $48,083. Seasonal and part-time labor accounted for slightly less than half of the payroll expenses (Table 3). Supplies such as fertilizers, pesticides, shipping boxes, and advertising accounted for the largest portion, 43 percent, of the non-payroll expenses (Table 4). The FY2022 expenses compared to FY2021 were down 9.5 percent. Staffing vacancies occurring during the year were a contributing factor. Non-payroll expenses increased by 6.7 percent. The nursery continues to work on controlling costs. FY2022 expenses to the nursery dedicated account remain below the 10-year average. A 10-year summary of revenues and expenses is included in Appendix 3.

Table 2: Nursery Expense Breakdown

Type	Number	Percent
Payroll expenses	$732,423	53%
Non-payroll expenses	$616,273	44%
TOTAL	**$1,348,696**	**100%**

Table 3: Payroll Expenses Breakdown

Type	Number	Percent
Full-time salary	$368,478	50%
Part-time and seasonal salary	$332,783	46%
Other employee costs (includes unemployment and worker's compensation)	$31,162	4%
TOTAL	**$732,423**	**100%**

Table 4: Non-payroll Expenses Breakdown

Type	Number	Percent
Supplies*, printing, and advertising	$267,236	43%
Fleet and travel	$61,180	10%
Computer systems and communications	$89,779	15%
Utilities	$29,442	5%
Other operating costs	$75,217	12%
Agency support costs	$80,601	13%
Equipment and repairs	$12,818	2%
TOTAL	**$616,273**	**100%**

*Primarily fertilizer, pesticides and shipping boxes.

Accelerated Tree Production – Legislative Funding FY2022-FY2023

During FY2022, $637,076 was expended from the one-time, $2.5 million FY22-23 appropriation to accelerate tree planting in Minnesota. Of this total, $80,246 was payroll expenses to help support two additional nursery technicians and a planning consultant. Non-payroll expenditures allowed for upgrading equipment and moving nursery planning forward. Several older model tractors were replaced along with other field, seed extractory, and packing line equipment in FY2022 to support increased seedling production in future years.

Nursery and DNR engineering staff toured state forest nurseries in Washington, Illinois, and Wisconsin to better understand current buildings, equipment and best practices being used at modern state nursery facilities across the country. A feasibility study was completed to identify needs and costs for modernizing the nursery in three phases. The first phase is being accomplished via a mix of funding (see below). Funding for the second phase was included in the 2023 capital investment budget passed by the Minnesota Legislature and signed by Governor Walz. Phase 3 funding will be pursued in future state capital investment requests, also with consideration of any available federal funding.

High priority projects for FY2023 include:

1) Develop an efficient, user-friendly, online customer ordering and inventory system. The current ordering approach relies on manual data entry and inventory verification, takes days for verification, and does not meet customer or marketplace expectations. We are currently conducting a business analysis to explore options for implementing an automated system.
2) Design and build a cold storage unit to maximize seedling sorting and grading operations during the short 6-week spring lift season. This effort is funded via a mix of funds including a grant from the federal government under the recently passed Bipartisan Infrastructure Law and state General Fund dollars.
3) Conduct field leveling and soil improvements to increase crop densities and return fields to full production. The process involves bringing in soil, peat, and other organic material to repair and rebuild seedling beds.
4) Procuring seed for sustaining higher levels of production at the nursery. This includes the purchase of ladders, elevated lifts, and other equipment necessary to procure seed at DNR seed orchards.

Challenges and Opportunities

The Nursery faces many current and future challenges, including impacts related to climate change, labor shortages, aging facilities and infrastructure, and weather/disease risks.

Nursery Growing Capacity and Reforestation Expectations

Climate change is anticipated to negatively affect the northern boreal forests. Adaptation efforts will be needed to increase hardwood species in areas historically populated by conifers, which will directly affect the nursery's production capacity. For example, a planted nursery bed of red pine produces approximately 40,000 sellable seedlings. By contrast, a bed of maple or oak produces only about 15,000 seedlings. If production shifts from conifers to hardwoods, more planting beds/area will be required to grow the same number of seedlings.

Minnesota's forests play an important role in the sequestration and long-term storage of atmospheric carbon. One important strategy to mitigate climate change is to increase the amount of carbon that forests store in trees and in forest soils. Reforestation, increasing the tree density in existing forests, and planting new forests on open lands where forests once stood, are among the most promising opportunities to achieve long-term offsets to carbon emissions.

The DNR has worked with other state agencies and the Governor's Climate Change Advisory Council to develop The Minnesota Climate Action Framework. This framework includes a priority action for restoring more forests and forest adaptation to help Minnesota mitigate and adapt to climate change. The Nature Conservancy has also developed a Minnesota Million initiative that proposes to reforest one million formerly forested acres in Minnesota by 2045. Other agencies, boards, nonprofits, and businesses -- including the Minnesota Forest Resources Council -- have identified reforestation as an important climate strategy for Minnesota. The U.S. Forest Service has requested proposals from state agencies and tribes to build stronger seedling production capacity. The funding is part of the Federal Bipartisan Infrastructure Law passed in 2022. DNR is pursuing these grant opportunities for the Minnesota State Forest Nursery facilities upgrades.

The State Forest Nursery by itself cannot supply all the conservation-grade seedlings that will be needed to implement these reforestation and forest adaptation goals and strategies. While there is capacity to further increase production at the nursery, increased seedling production will also be needed at tribal and private nursery facilities. Toward this end, the Minnesota Forest Resources Council recently passed a resolution that recommends enhancing public and private forest nursery capacity in Minnesota (see Appendix 4).

Seed and Cone Collection

Growing more trees requires planting more seeds, which in turn requires increases in seed and cone collection. The DNR can no longer rely solely on the diminishing population of voluntary pickers to supply the volume of seeds and cones needed to meet the increasing seedling demands. Maintaining a robust, diversified, sustainable seed procurement program is critical to increasing long-term nursery production, and requires investment of time and resources. The Division of Forestry will be increasing efforts in this area through a General Fund appropriation of $800,000 for fiscal years 2024-2027. Actions will include hiring a seed procurement specialist and additional seasonal laborers to review the seed collection operation and ensure adequate seed can be collected to meet the increased production needs. Two alternatives we are pursuing to increase seed production are increasing the seed orchards in Minnesota and contracting for seed and cone collection rather than solely relying on volunteer pickers paid per bushel. In addition to nursery infrastructure, the U.S. Forest Service has requested grant proposals for increasing seed procurement across the country. Minnesota has applied for seed procurement grant funding through the Forest Service program.

Seed Orchards

The DNR has over 20 small seed orchards around the state. These orchards consist of fields of trees that are maintained solely for seed production. Various techniques, such as grafting the tops of high-production mature trees onto younger stock, allow for greater production and easier seed gathering in seed orchards. One big advantage offered by seed orchards over seed and cones gathered from existing forests is the ability to select seed from the healthiest and highest quality trees to improve the productivity and resiliency of future forests.

Minnesota has begun evaluating improvements to older established seed orchards to meet anticipated future seed demand. The FY2022-2023 one-time state funding is being used to provide equipment that will allow

greater seed harvest from these orchards. In Minnesota, the General C.C. Andrews State Forest Nursery, which was discontinued as a tree nursery in 2013, presents an opportunity to establish additional seed orchards at relatively low cost given that the facility includes established, though currently idle, growing fields for seed orchard operation and associated infrastructure, such as irrigation wells.

Contract seed and cone collection

Contract seed and cone collectors for harvesting seed are additional avenues for securing additional seed. The Minnesota DNR currently advertises the need for seed and posts the compensation amounts, which is primarily per bushel of seeds or cones collected. Advertising is via the DNR website, news releases and social media, and provides information regarding how and where to pick. Beyond that, the DNR relies on pickers to "self-select" to engage in this activity and bring their collected seeds and cones to designated DNR sites for purchase. Contract collectors could be used to supplement exiting collection methods.

Considerable work is needed to expand DNR's orchard and wild seed collection. The states of Illinois and Washington both rely heavily on contract pickers. Contract agreements are executed between the state agency and pickers prior to collection activities; these contracts define where seed may be collected and how the picker will be paid. This practice has several advantages over Minnesota's private picker approach. Foresters in the field can identify areas and species showing good seed crop production and point contract pickers to areas where cones can be more readily retrieved. Contracted workers can be trained in more detail and certified to identify cone and seed quality. Contracts also give the state agency better control over seed sourcing by directing pickers to specific tree stands with superior growth and form traits, toward tree species with bumper crop years, or to collect seed and cone from specific tree species to address seed inventory shortages.

We are currently expanding other seed and cone collection approaches. For example, Conservation Corp of Minnesota and Iowa was recently contracted to collect seed from an orchard near Willow River. In the future, "Sentenced to Serve" agreements with county law enforcement agencies may be expanded. Tops can be removed from trees at timber harvest sites and transported to locations where sentence to serve workers can harvest the seed.

Action items: Determine the production potential of existing orchards. Prioritize the identification of wild seed procurement areas through area offices.

Modernization

New capital investments are needed to ensure the State Forest Nursery can effectively sustain its role in meeting Minnesota's current and future reforestation needs. The 2023 capital investment budget passed by the Minnesota Legislature and signed by Governor Walz includes bond funding for the critical modernization efforts described below (Phase 2 of the Feasibility Study).

Upgraded sorting and packing building

Since the closing of the General Andrews nursery site in 2013, all seedling production has been incorporated into the current site at the Badoura State Forest Nursery. The current building configuration does not allow for efficient processing of tree seedlings, nor does it incorporate modern safety features. This facility was designed to process high volumes of conifer seedlings that are immediately sent out to large-scale plantings on public lands with a small, separate sorting line for private tree orders. The variety and volume of seedlings processed

and stored at this facility have increased in recent years. In particular, improvements are needed to the ability to process hardwood seedlings, which are necessary to achieve climate mitigation reforestation goals and meet the needs of an increasing private customer base.

Modernized seed extraction

Extracting seed from cones is a critical aspect of the nursery's operations to ensure climate-appropriate seed is available. This seed is used for both planting seedlings at the nursery and aerial seeding of some public land timber harvest sites. The current seed extraction equipment, which dates from the 1980s, is costly to run, inefficient, and expensive or becoming impossible to repair. New seed-extraction equipment using up-to-date technology will improve energy efficiency, reduce water use, and decrease seed extraction time.

Increased seedling storage capacity

Cooler capacity has been identified as both a critical short- and long-term need. Reliable, climate-controlled cooler storage is crucial to ensure healthy, high-quality seedlings are available for planting each spring. Seedlings lifted in the spring must be temporarily stored in large coolers before shipment to their final planting sites. The current coolers at the nursery are undersized, lack reliable climate and humidity controls, and are positioned in a way that causes unsafe product flow and production inefficiencies.

The most urgent of these needs is being addressed by the FY2023 project to provide a front-end cooler to feed the sorting and grading process. Without this addition, processing greater numbers of trees during the 6-week spring lift season is not feasible. This project will not meet all of the need; however.

Considering the scientific predictions that Minnesota's future climate will favor hardwood trees, the nursery needs the capacity to produce more hardwood seedlings. Doing so will require additional cooler space because hardwood seedlings needed for central and southern Minnesota plantings are lifted in the fall, stored in coolers over winter, and shipped in the early spring before the ground at the nursery has thawed enough for the spring lift. The nursery has barely enough seedling storage capacity to meet current needs, let alone the anticipated increased needs of the future.

Improved energy efficiency and emergency power backup

In the event of a prolonged power outage or equipment failure, tens of thousands of dollars of refrigerated, processed seed and seedlings are currently at risk of loss due to inadequate and aging backup power systems. Generators and automated generator hook-ups that can operate in a power failure are critically needed to address this risk. Installing temperature and humidity regulation systems with backup power support will also improve seedling quality and energy efficiency.

The modernization efforts noted above will allow the DNR to enhance current and future seedling production through improvements in seed extraction, seedling cold storage, and production efficiency. These investments will reduce the risk of seed and seedling loss and improve the ability to safely deliver increased numbers of seedling into the future.

Bare-root and Plug Seedlings (i.e., “Containerized Seedlings”)

Currently, no private or public nursery in Minnesota produces large enough quantities of conservation-grade “plug seedlings” (often called “containerized seedlings”) to meet the State of Minnesota’s reforestation needs. Aptly named, the roots of plug seedlings are surrounded by a soil plug and are grown in containers inside a large greenhouse. Plug seedlings, which have better survival rates after planting, are strongly preferred over bare-root seedlings (the type of seedling currently produced at the State Forest Nursery) for some conditions. Producing plug seedlings at the State Forest Nursery would reduce Minnesota’s current dependence on a single, out-of-state commercial grower of plug seedlings and help ensure the state has the seedling stock needed for reforestation and climate mitigation efforts.

One of the challenges associated with bare-root seedlings is the short window of opportunity to harvest (i.e., “lift”) the seedlings from the growing beds at the nursery and transport and plant them at reforestation sites. The lifting, sorting, packing, shipping, and final planting of bare-root seedlings all must occur in a five- to six-week window each spring between when frost leaves the ground and when the seedlings break their winter dormancy. In contrast, plug seedlings are more easily stored and have a wider planting window. This means that more seedlings can be planted each spring and land managers can store seedlings if needed to avoid planting in conditions that reduce seedling survival rates. Ultimately, a combination of bare-root and container-grown plug seedlings is needed to provide the best options to successfully reforest more acres in Minnesota. Expanding the state forest nursery’s capacity to grow containerized seedlings is an option to increase production and provide seedlings to areas not suited well for bare-root stock.

Proposed action: Pursue the investment identified in the 2023 DNR nursery feasibility study and the policy change necessary for the DNR to produce plug seedlings at the State Forest Nursery. This will: 1) alleviate the state’s dependence on a single, out-of-state commercial grower for conservation grade plug seedlings; 2) lengthen the planting season; and 3) help meet the increased demand for seedlings for reforestation and climate mitigation efforts.

Summary

The State Forest Nursery continues to play a vital role as the only large-scale Minnesota supplier of conservation-grade seedlings for reforestation efforts on state-administered and private lands. In FY2022, the nursery supplied 3.1 million seedlings for reforestation efforts on public and private land.

The COVID-19 pandemic’s adverse effects on nursery production are subsiding. The DNR is increasing seedling production at the nursery with one-time funding provided by the 2021 Legislature. The 2023 capital investment bill passed by the Minnesota legislature and signed by Governor Walz will provide critical investments needed to modernize the nursery facility and further expand production so that the State Forest Nursery together with private and tribal nursery facilities can meet the demands of current and future reforestation needs.

Appendices

Appendix 1: FY2022 Statement of Revenues and Expenses, State Forest Nursery Account

Description	Amount ($)
Balance beginning FY22	614,696
Revenues	
Nursery Seedlings	1,091,902
Nursery Seed*	137,170
Refunds of Prior Year Expenditures/Cash Overages	1,051
Investment Income	883
Total Revenues	**$1,231,006**
Expenses	
Salary and Other Compensation	732,424
Supplies and Expenses	616,272
Equipment and Capital Improvements	0
Total Expenses	**$1,348,696**
Ending Balance Roll forward to FY23	**$497,006**
FY2022 Revenues minus expenses	**-$117,690**

*Seed is sold to reforest state-administered lands either through direct aerial seeding or distribution to contract growers to be delivered back to the Division of Forestry for planting on state lands.

Appendix 2: FY 2022 Accounts Receivables and Cash Sales

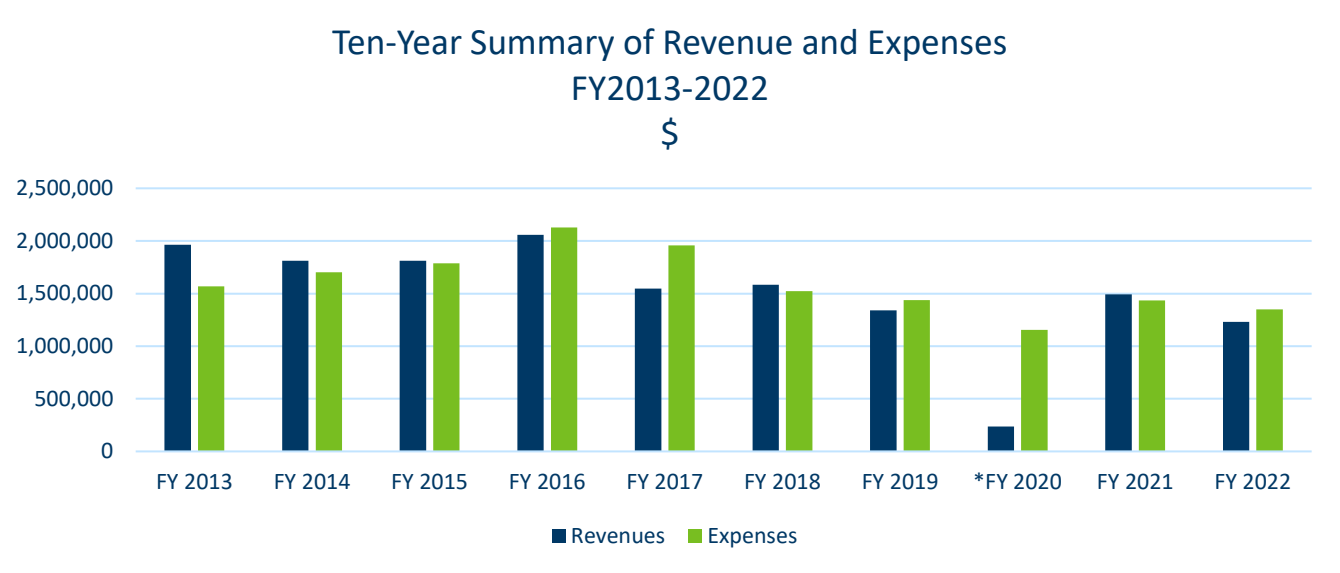
Description	Amount ($)
Receivables remaining from prior fiscal years	10,558
FY22 Accounts Receivables	791,272
FY22 Write Offs and Adjustments*	(4,947)
Total Receivables**	$796,883
Outstanding Receivables in FY22	796,883
Collected on Receivables in FY22	790,066
Remaining Receivables to be collected in FY23	$6,817
Collected Cash Sales in FY22	790,066
Collected on Receivables in FY22	440,941
Refunds in FY22	0
Total Collected Revenue FY22	**$1,231,007**

*Adjustments are used to cancel and/or correct invoice amounts and write-offs (e.g., people canceling or changing their seedling order amounts)

**WIRES reports were used for the amounts billed, collected, and adjusted. WIRES is the DNR's revenue/receivable system and stands for Web Integrated Revenue/Receivable System.

Appendix 3: Ten-Year Summary Analysis of Revenue and Expenses FY2012-2021

Year	Beginning Balance $	Revenues $	Expenses $	Ending Balance $
FY 2013	1,460,394	1,962,297	1,567,588	1,855,103
FY 2014	1,855,103	1,812,082	1,703,114	1,964,070
FY 2015	1,964,070	1,810,865	1,787,504	1,987,431
FY 2016	1,987,431	2,058,630	2,127,752	1,918,310
FY 2017	1,918,310	1,546,417	1,956,735	1,507,991
FY 2018	1,507,991	1,583,790	1,522,104	1,569,678
FY 2019	1,569,678	1,339,985	1,436,427	1,473,236
FY 2020	1,473,236	237,235	1,155,975	554,497
FY 2021	554,497	1,493,505	1,433,306	614,696
FY 2022	614,696	1,231,006	1,348,695	497,007
3 Year Average	880,810	987,249	1,312,659	555,400
5 Year Average	1,144,020	1,177,104	1,379,301	941,823
7 Year Average	1,375,120	1,355,795	1,568,713	1,162,202
10 Year Average	1,490,541	1,507,581	1,603,920	1,394,202



Note: *When completing the 10-year table we adjust the previous fiscal year to actuals. Due to the timing of the report, encumbrances are either actually incurred or cancelled. An adjustment is made to the previous fiscal year carryforward.*

Appendix 4: Minnesota Forest Resource Council Resolution for Increased Seedling Production

Minnesota Forest Resources Council Resolution 2022-2

"Contributing to Minnesota's Climate Change Goals by Increasing Minnesota Nursery Capacity"

1. **WHEREAS,** Minnesota's forests provide critical benefits for the economy, recreation, wildlife, clean water, biodiversity, and greenhouse gas mitigation; and

2. **WHEREAS,** the state forest nursery once produced over 12 million seedlings per year to support those benefits, but now produces < 4 million; and

3. **WHEREAS,** the State Nursery is outdated, inefficient, and incapable of producing containerized seedlings; and

4. **WHEREAS,** a modernized state forest nursery and additional private nurseries could play a critical role in mitigating climate change and increasing other benefits forests provide; and

5. **AND WHEREAS,** per Minnesota Statutes 89A Subd2, it is the role of the Minnesota Forest Resources Council to recommend policies and practices that: foster the productivity of the state's forests to provide a diversity of sustainable benefits at site levels and landscape levels; enhance the ability of the state's forest resources to provide future benefits and services; and foster no net loss of forest land in Minnesota;

6. **BE IT THEREFORE RESOLVED,** the Minnesota Forest Resources Council recommends enhancing nursery capacity in both State run and privately owned forest nurseries by:
   a. Upgrading State Forest Nursery facilities by 2027, to produce both containerized and bare-root seedlings, using modern technology to track seed-source locations, while minimizing risks to seeds that are stored on site.
   b. Increasing State Forest nursery production from current capacity of 4 million trees per year to 10 million trees per year by 2027, to double SFN capacity again by 2032, and to continue to increase SFN production capacity as necessary to plant up to 1 million acres of new forest by 2050.
   c. Providing long-term contracts and other incentives to support the expansion of private nursery operations in furtherance of reforestation goals.

7. **BE IT FURTHER RESOLVED,** the Minnesota Forest Resources Council recommends enhancing tree seedling capacity, production, and delivery by:
   a. Promoting collaborative efforts to reforest 1-million acres of appropriate non-forested lands by 2050.
   b. Incentivizing private land tree planting through cost-share programs, partnerships, and projects to fully utilize planned increases in nursery stock.
   c. Increasing funding for state forest nursery staff and contracted seed collectors to ensure adequate labor for the entire process from collecting seed to preparing seedlings for distribution.
   d. Utilizing tree seed orchards, localized tree storage/distribution centers, and other nursery supply diversification strategies.
   e. Re-evaluating the current "enterprise" model for the State Nursery that depends upon annual seedling sales to cover operational costs.
   f. Removing legislative prohibitions on state forest nursery production capacity and seedling sales.
   g. Implementing quality assurance strategies to improve seedling survival, tree genetics, disease resistance, and species suitability for changing climate.

Motion adopting **"Contributing to Minnesota's Climate Change Goals by Increasing Minnesota Nursery Capacity"** (MFRC Resolution 2022-2) as a 2022 priority policy recommendation of the Minnesota Forest Resources Council; and directing the MFRC Chair to submit the resolution to The Honorable Governor Timothy Walz, and to the Chairs and Ranking Minority Members of the appropriate House and Senate Committees of the Minnesota State Legislature.

AYES (11) Craig Engwall, Janet Erdman, Kathleen Preece, Katie Fernholz, Kim Berns-Melhus, Kory Cease, Mike Kilgore, Pete Aube, Rick Horton, Keith Karnes, Jim Manolis

NAYS None

ABSTAIN (1) Forrest Boe

ABSENT (4) Bob Owens, Connie Cummins, Deb Theisen, Scott Pittack

Attested to by: 01/18/2022
Pete Aube, Chair, Minnesota Forest Resources Council Date