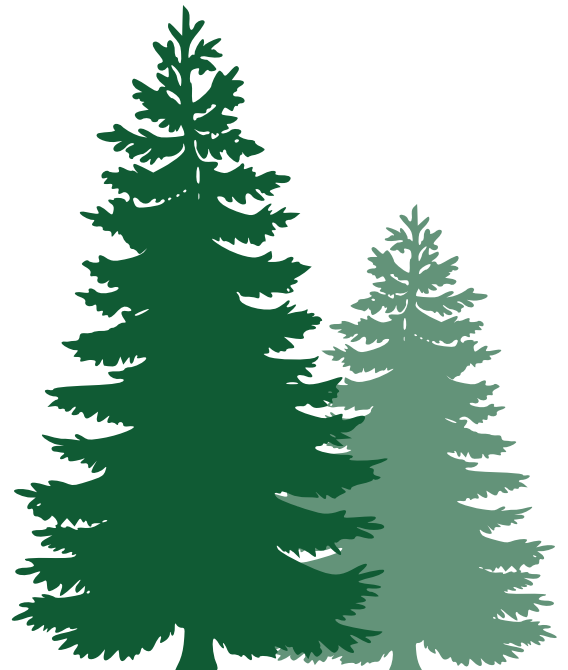

2020 - 21 SCHOOL YEAR

**ANNUAL
SCHOOL
FOREST
SURVEY
RESULTS**

www3.uwsp.edu/cnr-ap/leaf/Pages/default.aspx / (715) 346 - 4956 / leaf@uwsp.edu

Table of Contents

2	Response Rate
3	Survey Respondents
4	School Forest Success
7	School Forest Utilization
13	Forest Management
15	LEAF and School Forest Assistance
16	School Forest Personnel
17	School Forest Budget



RESPONSE RATE

Ninety-two individual schools or districts provided responses to the survey out of 241 individual schools or districts that received the survey. Ninety-six (96) school or district responses were received from 91 public school districts, 3 private schools, and 2 higher education institutions. This is a 25% response rate. The survey was sent to 234 public schools, 6 private schools, and 1 higher education institution with registered school forests. Overall, it was distributed to over 379 contacts within the school forest database.

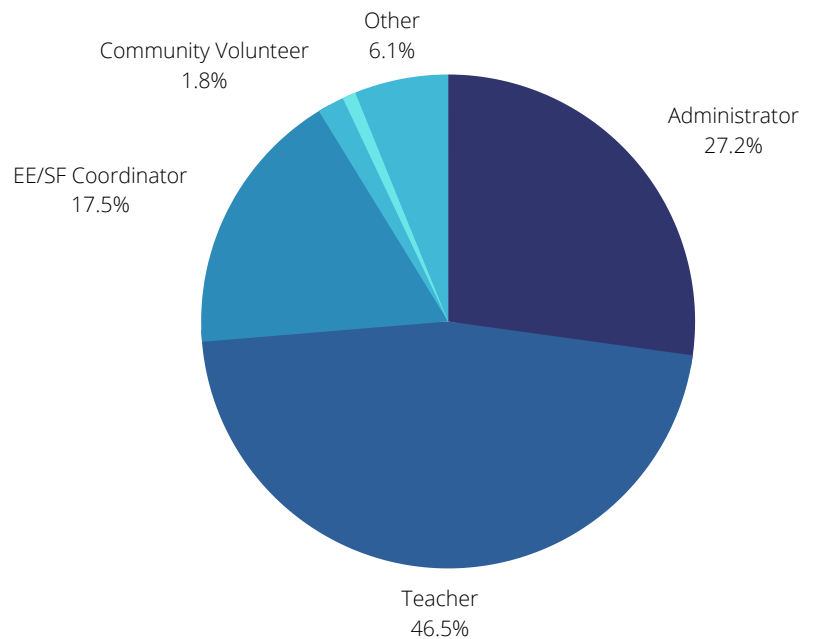
Interestingly 54% of the districts that participated in the survey this year also did so last year. That means that 46% of the school districts that responded differed from last year's participants and 46 of the districts

that completed the survey last year did not complete the survey this year. As a result, this survey serves as a “snapshot” of school forest activity in Wisconsin, not as a comprehensive report. Ironically, even as the district participation changes each year, the survey completion rate and responses seem to stay relatively consistent. That consistency is seen in a few of the charts that show comparative data. However, since not all school forests submit data and not all the same school forests submit data every year, we can observe general trends throughout certain questions in the survey, but do not assume that these are precise and final numbers. Therefore, this report is merely a representation of Wisconsin's School Forest Program over the past year.

The schools/districts who responded include: Antigo, Ashland, Baldwin-Woodville, Berlin, Black Hawk, Bonduel, Boscobel, Bruce, Cadott, Cambria-Friesland, Cambridge, Campbellsport, Cedarburg, Chequamegon, Chilton, Cumberland, DC Everest, Eau Claire, Elcho, Elmwood, Evansville, Gillett, Green Lake, Greendale, Hudson, Iola-Scandinavia, Janesville, Kickapoo, La Crosse, Lac du Flambeau, Lake Holcombe, Lodi, Madison Metropolitan, Manawa, Maple, Marathon, Marion, Marshfield, Medford, Mellen, Melrose-Mindoro, Mercer, Merrill, Merrimac, Milwaukee, Mishicot, Mondovi, Montello, Mukwonago, Nekoosa, New London, Newman Catholic, Nicolet, Northland Pines, Norwalk-Ontario-Wilton, Oakfield, Oconto Falls, Owen-Withee, Phillips, Pittsville, Prentice, Princeton, Random Lake, Rhinelander, Rib Lake, Rice Lake, River Falls, River Valley, Riverdale, Sauk Prairie, South Shore, St. Paul Lutheran, Stevens Point, Suring, Three Lakes, Tomahawk, Tomorrow River, Trinity Lutheran, Turtle Lake, Unity, UW – River Falls, Wabeno, Waupun, Wausaukee, Westby, Westfield, Weyauwega-Fremont, White Lake, Whitnall, Winter, Wisconsin Dells, and Wonewoc-Center.

SURVEY RESPONDENTS (N = 98)

- EE/SF Coordinator = 20
- Building & Grounds Coordinator = 1
- Community Volunteer = 2
- Pupil Services/Guidance Dept. = 0
- Other: 7 (SF committee chairperson, retired science educator and SF overseer, learning center director, FFA advisor, challenge course manager, consultant, and SF education liaison)
- Administrator = 31
- Teacher = 53



GRADE LEVELS TAUGHT

- Early Childhood: 5
- Elementary: 24
- Middle School/Jr High: 32
- High School: 53
- Post-Secondary: 5

SUBJECTS/CLASSES TAUGHT

- All subjects (elem. teachers): 15
- Art: 0
- Agriculture Education: 23
- English: 0
- Math: 1
- Physical Education: 1
- Science: 22
- Social Studies: 0
- Special Education: 0
- Technology Education: 1
- Other: 10 (natural science, retired, multiple subjects K-12, project-based, coordinate outdoor classroom, experiential education, educational consultant, AP psychology, and outdoor environmental education)

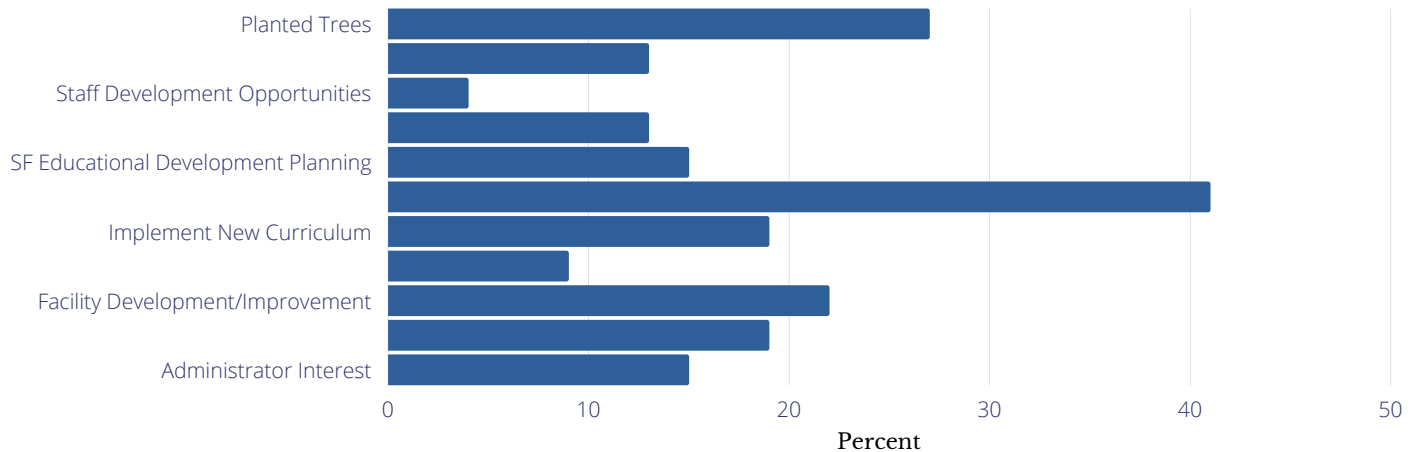
SCHOOL FOREST SUCCESS

GREATEST SCHOOL FOREST ACCOMPLISHMENTS

Responses indicating the district's greatest school forest accomplishments in the 2020-2021 school year:

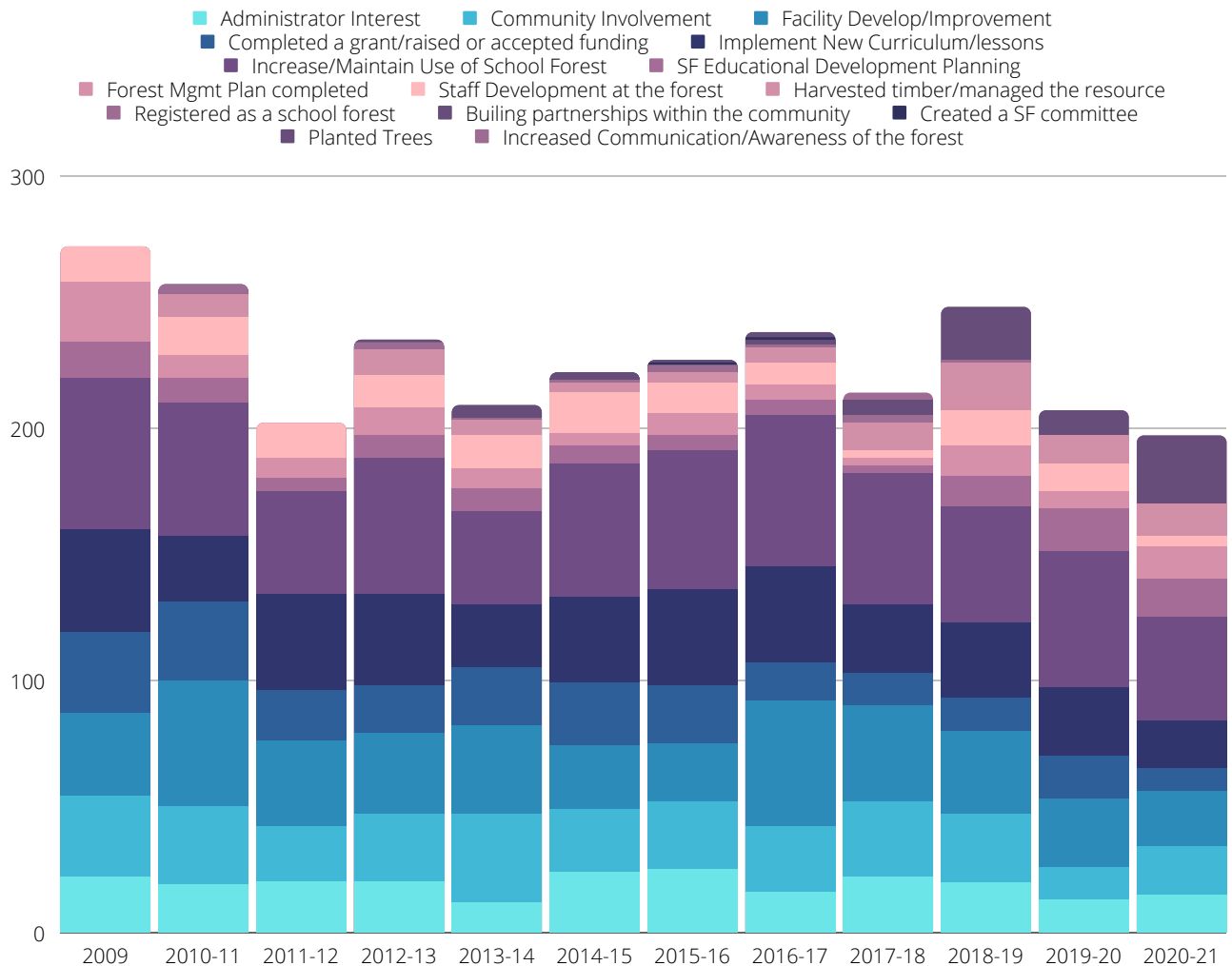
Administrator interest-15%, Community involvement-19%, Facility development/improvement-22%, Completed a grant-9%, Implement new curriculum-19%, Increased or maintained use of the school forest-41%, School Forest educational development planning-15%, School Forest management plan completed-13%, Staff development opportunities-4%, Harvest/manage natural resources-13%, Planted trees-27%, and a few others seen below.

Greatest Accomplishments In the 2020 - 21 School Year (N = 94)



The comparative data show which school forest accomplishments were identified over the past 12 years. Certain trends have begun to emerge with the challenge of increasing or maintaining the use of the school forest as the top accomplishment recognized by school forest programs across the state. Other top accomplishments include implementing new curriculum or lessons at the forest and improving or developing facilities at the school forest. Planting trees seems to be a more recent emerging top accomplishment.

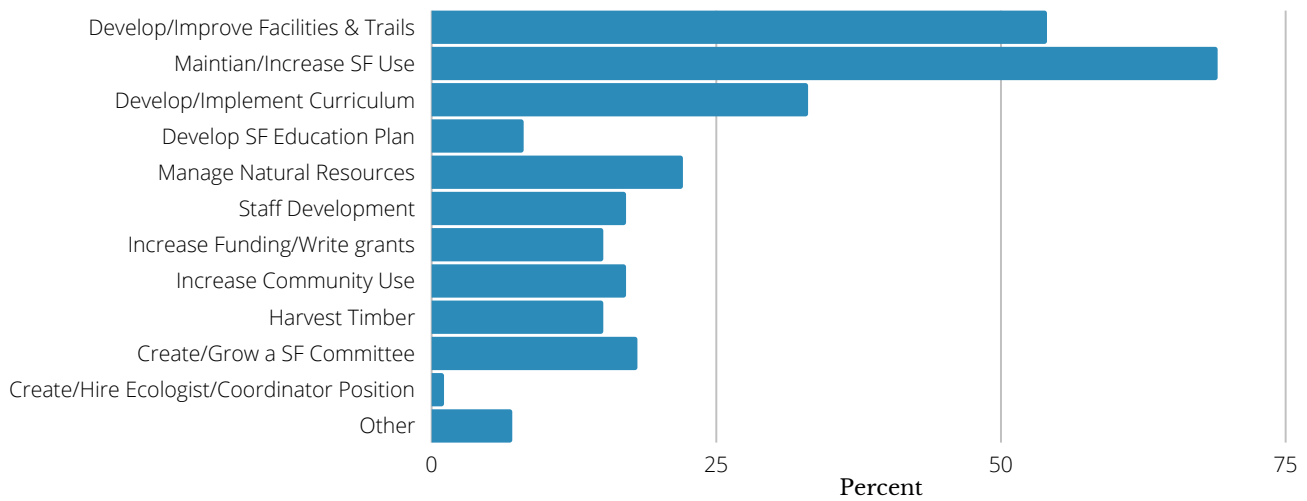
Comparative Data: School Forest Accomplishments



GOALS FOR THE NEXT 1 - 3 YEARS

The main school forest goals cited by the schools for the next three years are to maintain or increase the use of the school forest, to develop or improve school forest facilities and trails, and to develop or implement curriculum at the school forest. The chart below shows school forest goals listed in each category by the ninety-six (96) schools that responded.

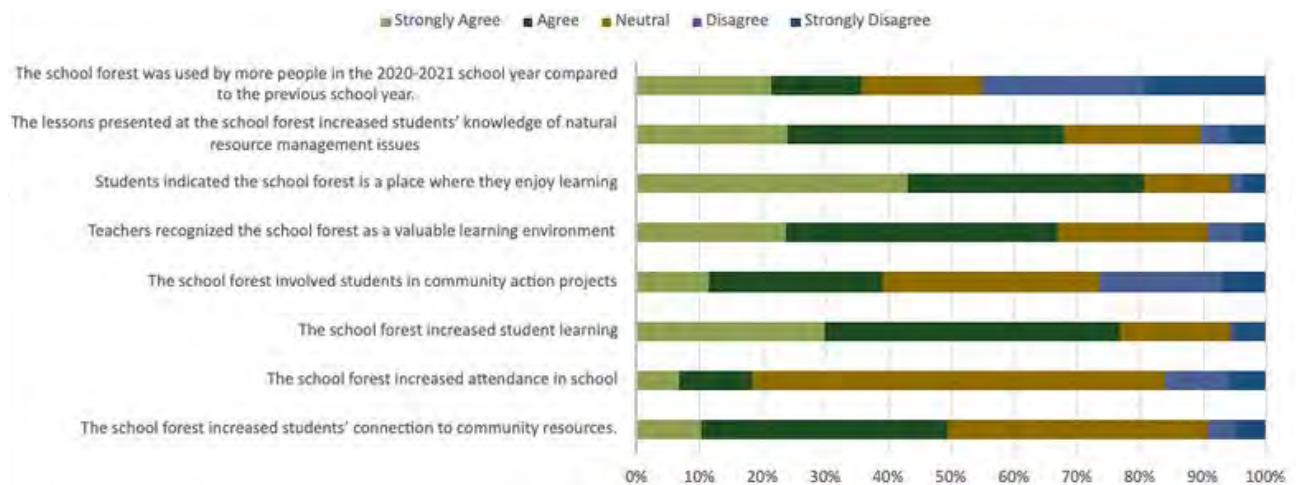
School Forest Goals for the Next 1-3 Years (N=96)



INDICATORS OF SCHOOL FOREST SUCCESS FOR 2020-21

Eighty-nine (89) schools responded. Results are listed as percentages.

Indicators of School Forest Success for 2020-21 School Year



SCHOOL FOREST UTILIZATION DURING THE 2020-21 SCHOOL YEAR

STUDENT VISITS

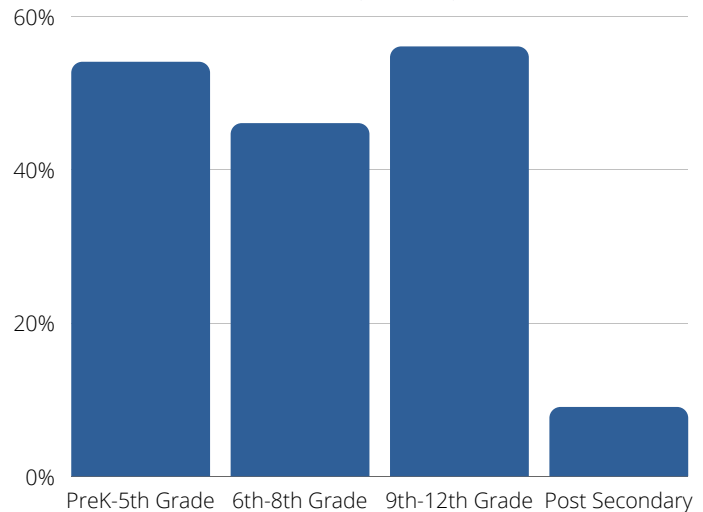
The following data have been calculated based off the number of school districts that responded for each grade level. More comprehensive data is available upon request.

- **School Forest Use.** Respondents indicated that 54% of the forests had visits from PreK-5th grade students, 46% had visits from 6th-8th grade students, 56% had students in 9th-12th grade that visited, and 9% had post-secondary students.
- **Number of Students.** A total of **21,376 students** visited their school forests during the last school year. In reality, this total number is much higher. Many school forests that have daily field trips to the forest did not respond to the survey. The average number of students from each grade level that visited their school forest can be seen in the chart below.

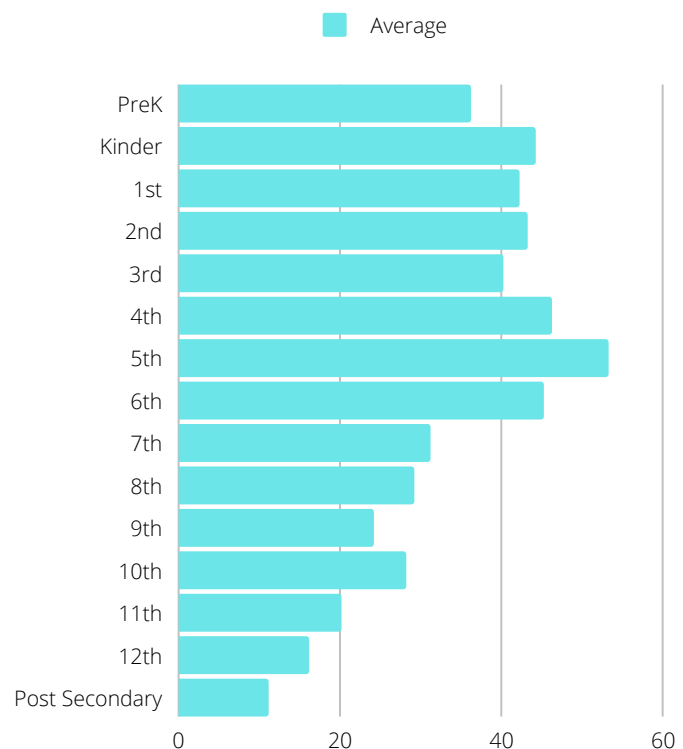
The number of students per grade level reported is as follows: 1,574 Pre-Kindergarten, 1,950 Kindergarten, 1,855 1st grade, 1,873 2nd grade, 1,741 3rd grade, 2,038 - 4th grade, 2,320 - 5th grade, 1,670 6th grade, 1,156 7th grade, 1,079 8th grade, 1,064 9th grade, 1,304 10th grade, 917 11th grade, 756 12th grade, and 79 post-Secondary students.

- **Number of Trips.** Respondents reported a total of 3,439 field trips to school forests in Wisconsin. The average number of times (trips) each grade level visited the school forest can be seen in the chart below.

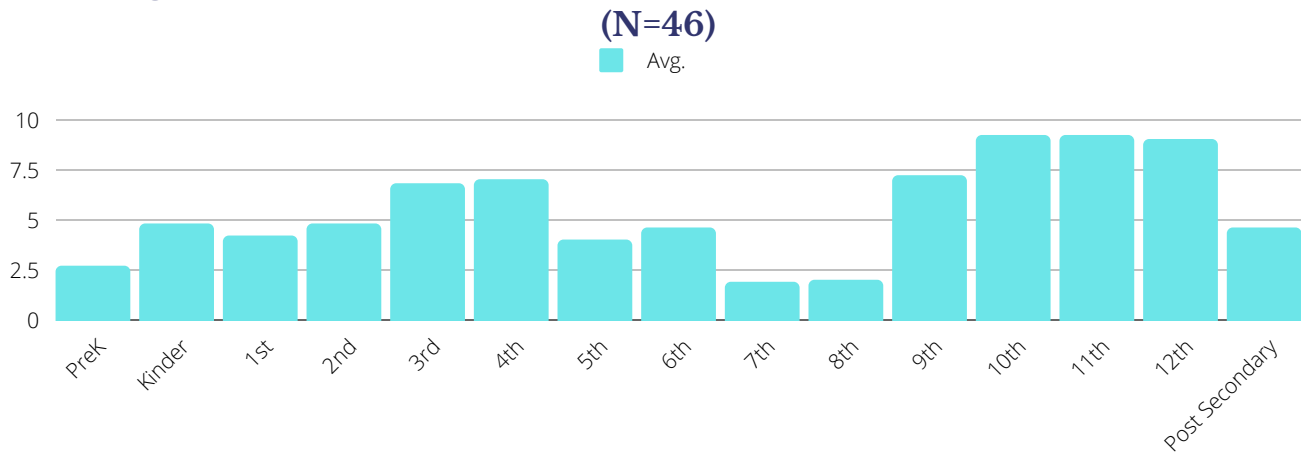
Grade Levels That Visited the School Forests (N=85)



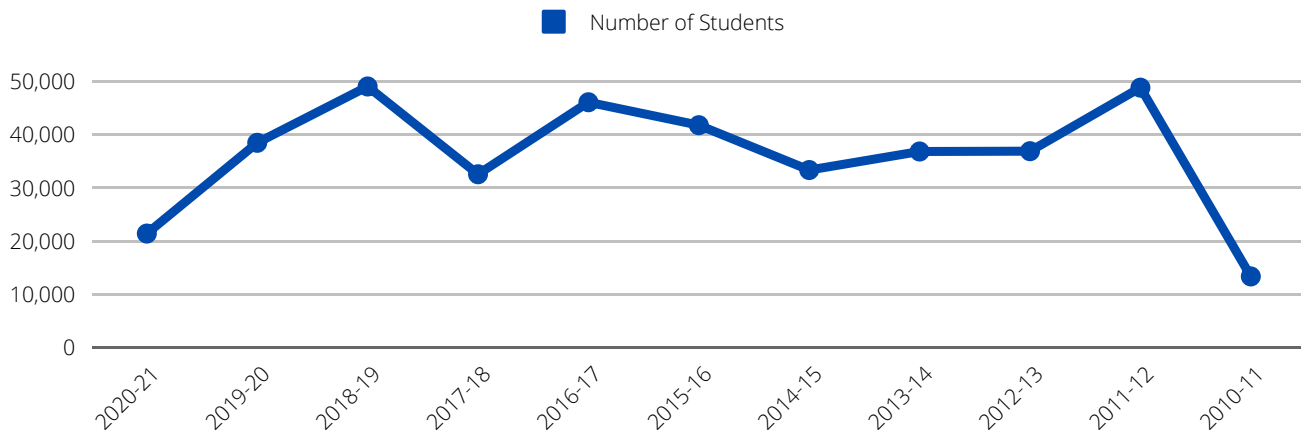
Average Number of Students that Visited the School Forest in 2020-21 (N=46)



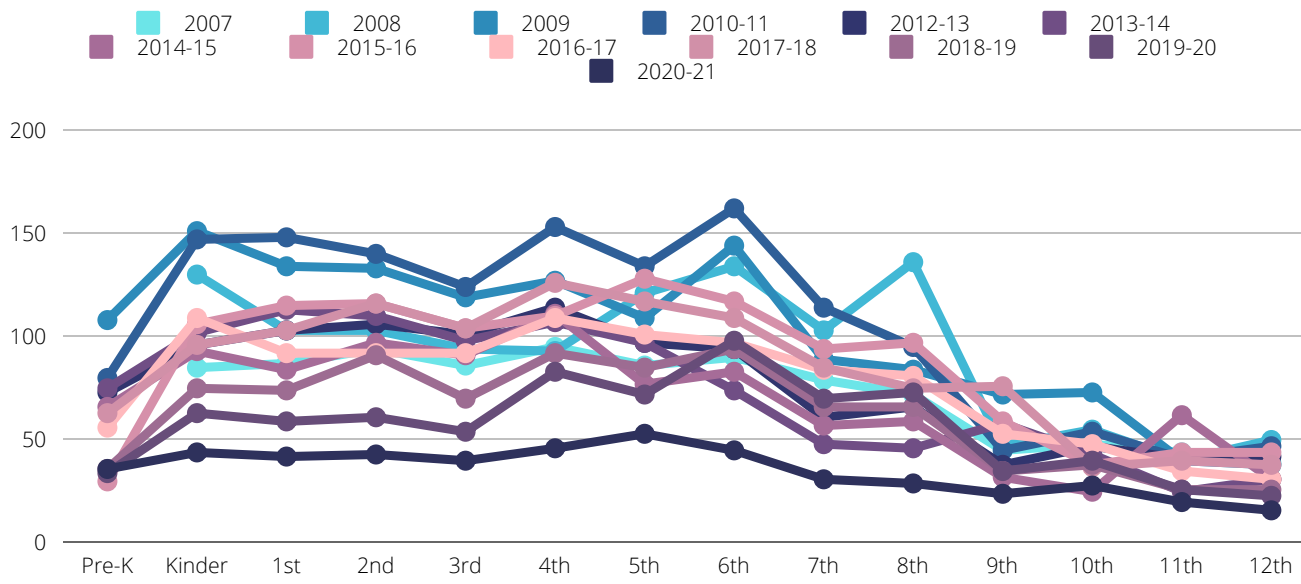
Average Number of Times Students Visited the School Forest in 2020-21



Comparative Data: Reported Number of Students that Visited their School Forest Each Year



Comparative Data: Average Number of Students that Visited the School Forest Each Year By Grade Level



WHAT ARE STUDENTS LEARNING AT THE SCHOOL FOREST

Evidence of Student Learning as a Result of School Forest Experiences

The following examples were recorded by respondents as both formal and informal evidence of student learning that has taken place because of student field trips at the school forest.

- Students worked on specific projects such as trail improvement, wetland improvements, helping make maple syrup, identifying tree species/flower species/mammal species & tracks/fisheries.
- Winter tree ID, mushroom and plant foraging and growing, winter snowshoeing, hiking, and wildlife monitoring.
- Scavenger hunts displayed what we were learning in class and its application and brought out students after standardized testing to have a fire and opportunity for exploration, food, and fun.
- Assessments included proper completion of graphic organizers, tree identification in the field, biotic/abiotic factor inventory, phenological observations; Aldo Leopold essays & accompanying questions; food webs; application to future work etc. Students used artifacts such as photos, drawings, journals, and demonstrations to show learning.
- Students studied and created habitats for birds and bees, raised tadpoles from our creek, and created manmade beehives.
- Our Middle School STEM Academy is working on animal identification through various baiting techniques and is updating our outdoor classroom. Our high school students in Environmental Education and Wildlife Management courses conduct labs like: population density studies, restoration projects, wilderness survival, stream studies, plant and animal identification, silviculture, and timber cruises.
- After our trips into the forest, students do a senses writing projects, animal identification (as we manage a Snapshot WI camera), finding our ABCs in nature, observe the various stages of a tree's life cycle, plant trees, identify various plants, addition and subtraction problems etc. Assessment usually comes through drawings, picture taking, and writings from the students.
- Ag classes are planting and managing crops and are involved in the decisions of harvesting timber. Our science department helps plant trees and a pollinator garden. We have involved our local DNR representative, to assist us with some of our informal lessons.
- Our students use the school forest for reading and writing workshop time, conducted a macroinvertebrate hunt in the small stream that flows through the forest, continue to develop a trail through the property, and exploring it through the changing seasons. We also used the forest to do various science missions using the app Agents of Discovery. The students always show increased motivation and engagement in activities when we take them to the school forest.
- We produced asynchronous and synchronous virtual field trip lessons and nature hikes (including to the Boston School Forest). We changed a lot of what we did this year so that we taught 98% of all lessons outdoors.
- Chainsaw Safety Certification trainings: Forestry Techniques Course (Mensuration, Assessment, Identification, etc) and Forest Restoration Course (Management plan development, Forest ecology). Assessment included exams, homework assignments, management plan, lab reports
- Students were amazed by the forest ecosystem, planted trees and recognized their contribution to the ecosystem, learned construction skills as they built learning areas for the forest, used the natural items to create art, learned how to take care of their forest, "leave no trace," learned how animals use the forest habitat to survive, learned that the forest has social and emotional benefits, mindfulness and sensory activities, collected data related to animal species and behavior in the forest, learned about the diversity of animals and plants in the forest, learned that a forest can be used for physical activities, removed invasive species, and enhanced the forest environment with a pollinator garden.

SUSTAINABILITY THROUGH SCHOOL FORESTS

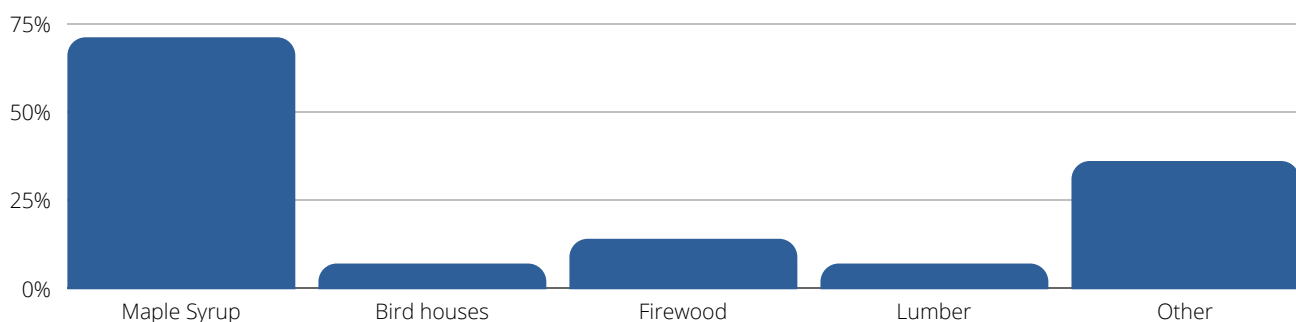
The school forest was used to help students understand the forest's economic, social, or environmental importance in the community in 44 (or 46%) of the schools that responded. The following examples are a shortened list that indicates how the school forest was used to help students understand the economic, social, or environmental impact it has on the local community.

- Planting of garden and sharing produce with school lunch and community food bank. They also made apple sauce from apples grown there.
- We had a unit on invasive species and how they affect the economic part of our school. Students were able to learn in a different environment, which creates conversations and enhances learning and sparks their social skills. When we had our fire, we were sure to teach how to properly put it out, and not leave any trash behind, which displays the economic impact on our local community.
- Students planted trees to reinforce "human decisions impact Earth's resources," and it is our responsibility to replace what we use.
- Planting trees including campus and wider River Falls community audience
- Managing the forest with student help, held a number of project days to include students in the management process
- Hired student employees and involved student volunteers with removing/controlling invasive species
- We harvested pine from our school forest that was planted by classes 20 years earlier. We will use this money to reinvest in building the learning center. We held lessons during this process with a local DNR employee who also was involved in developing the original forest plan. Classes got to observe the process from start to finish.
- We engaged in removing invasive species, marking and clearing trails, and even a Halloween walk through event for the students.
- Created informational posters about our trillium, included plants to avoid and those that are a natural resource, DNR camera allowed for discussion on animal usage of woods and how to help them in their habitat, tapped maples and made syrup.
- Students cleaned litter and old tires out of the school forest this spring. The tires were recycled at the county Clean Sweep this spring.
- Local and state officials touring.

PRODUCTS CREATED FROM THE SCHOOL FORESTS

Fourteen (14) of the school forests (or 16%) had students involved in making value-added forest products from the school forest that are sold or donated to the community. They indicated those products included maple syrup, firewood, lumber, bird houses, Christmas tree wreaths, produce (from the school garden), applesauce, salsa, and shiitake mushrooms.

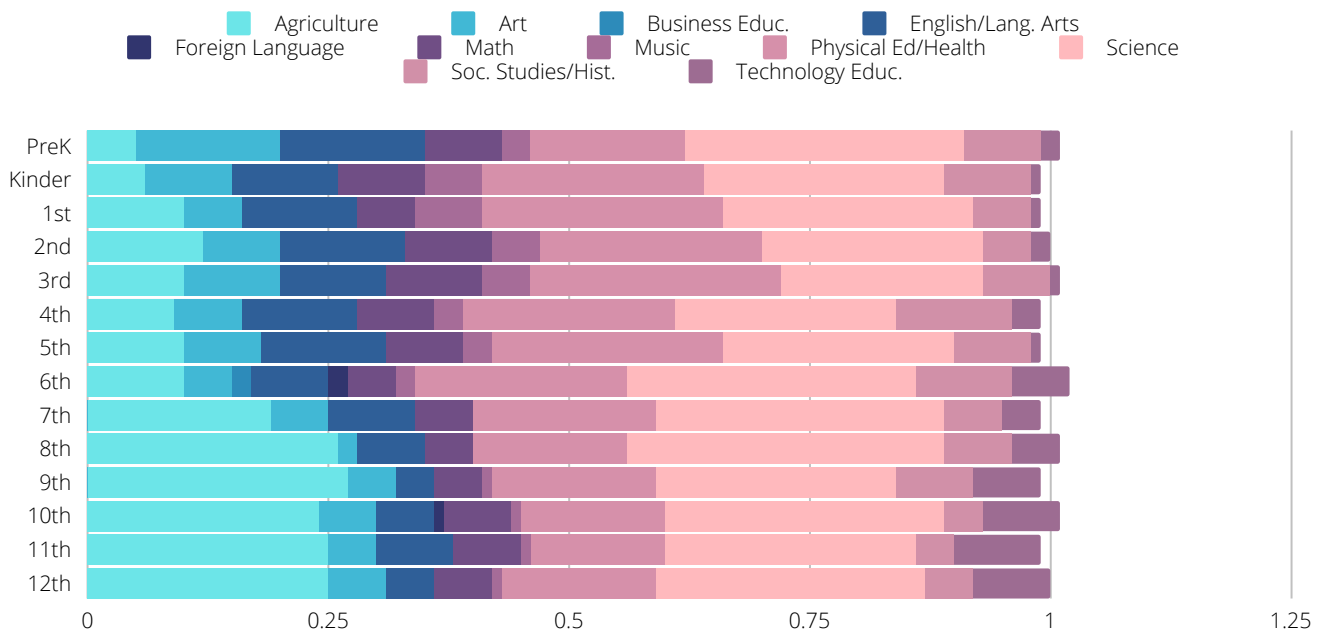
Value Added Products From School Forests (N=14)



SUBJECTS COVERED BY LESSONS AT THE SCHOOL FOREST

Respondents identified which **subjects were covered in lessons** students were learning about while at the forest. Respondents could choose from the options found on the charts below. The following chart shows a comparison of the subjects covered throughout each grade level. Science is the most covered subject at the school forest for all grade levels. All subject areas were covered by at least one grade level! This validates that school forests are not only a place to learn about the forest resource itself, but it also serves as an outdoor classroom where students can learn about other subjects and concepts along with science and forestry.

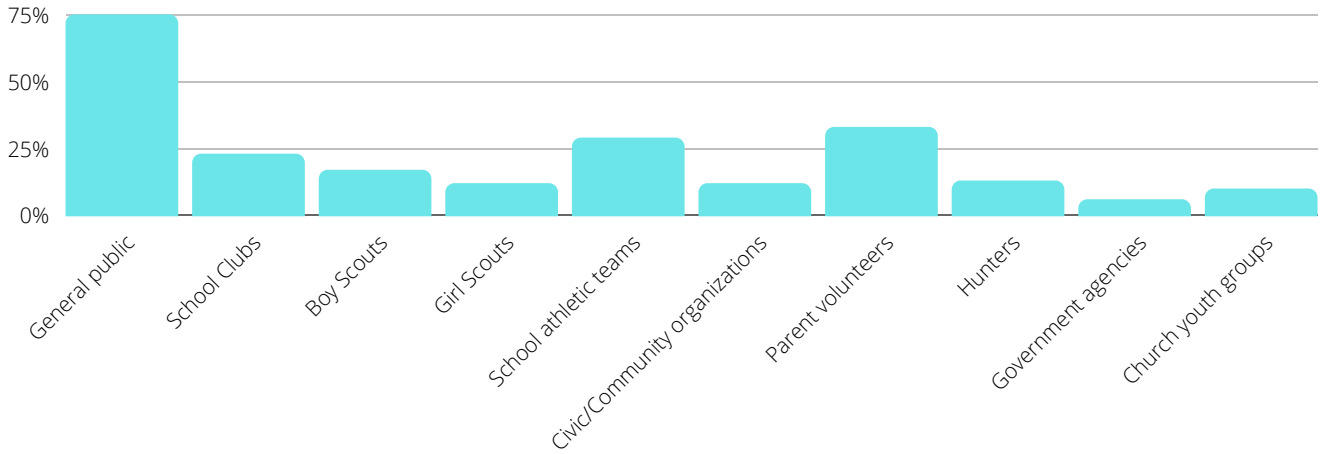
Subjects Covered by PreK-12 Grade Lessons at the School Forest 2020-21



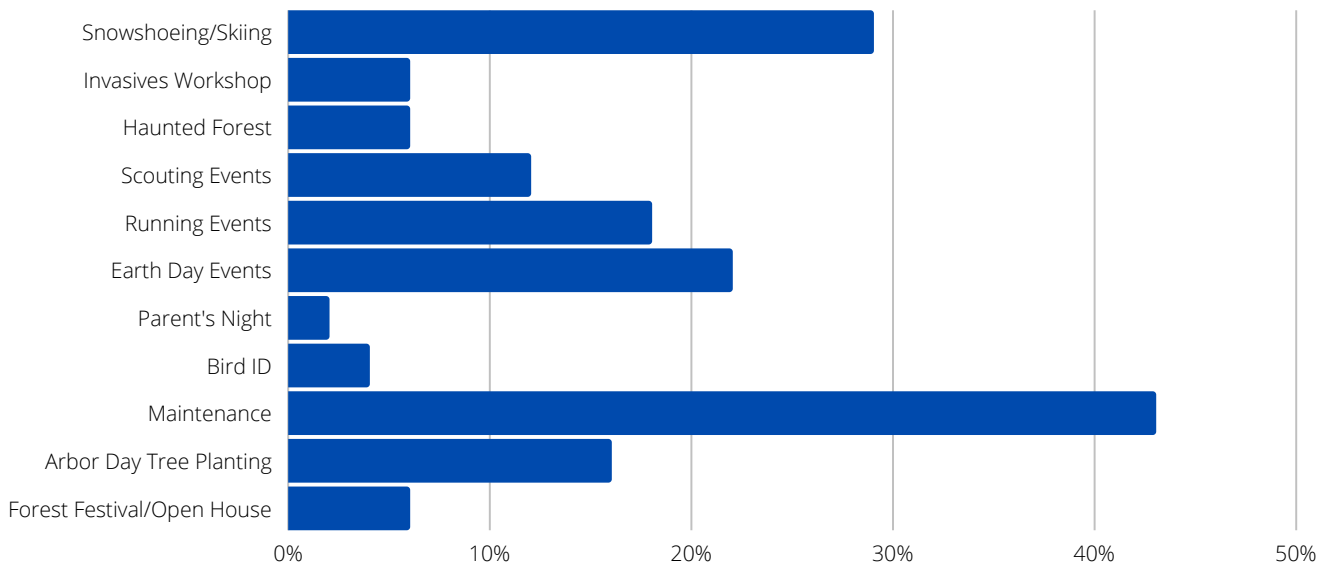
COMMUNITY USE OF THE SCHOOL FOREST

- **Community members** used 54 (or 62%) of the school forests in the school districts that responded (n=90).
- **Collectively**, 7,135 community members utilized the 49 school forests that responded to an inquiry asking how many community members used their school forest.
- The number of community members that used the school forests **ranged** from 1 to 2,000 people.
- **Utilization of the school forest** was highest from the general public, including recreationists but not hunters. The districts indicated church youth groups, government agencies, hunters, parent volunteers, civic/community organizations, school athletic teams, girl scouts, boy scouts, and school clubs also used the school forest.
- Community members or local community organizations were **involved in helping manage** the forest’s natural resources on 21 school forests, or 55% of the school forests that responded.
- **Community events** were hosted or provided by 16 (or 18%) of the school forests that responded. The type of community event is seen in the chart below. Other various special topic events listed: Celebrate the Seasons, First Day Hike, garden weeding, after-school family activities, 4H and FFA meetings, Ruffed Grouse and American Woodcock hunting, dog walking, fishing, Wisconsin School Garden Day, Plant Dane Day, School Forest Award Celebration, leadership team meetings, eagle Scout meeting, virtual learning and exploration week, Conservation Fair, geocaching, field trips, Advisory Committee work days, facility rentals for weddings, reunions and showers, tree planting, and open trails for community use.

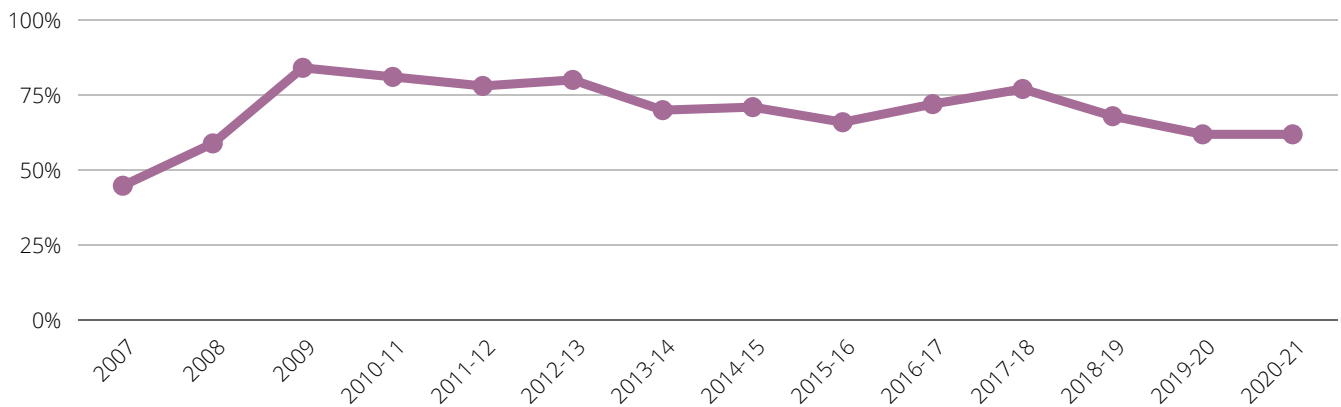
Community Members Who Use the School Forests in 2020-21 (N=52)



Community Events at the School Forests in 2020-21 (N=49)



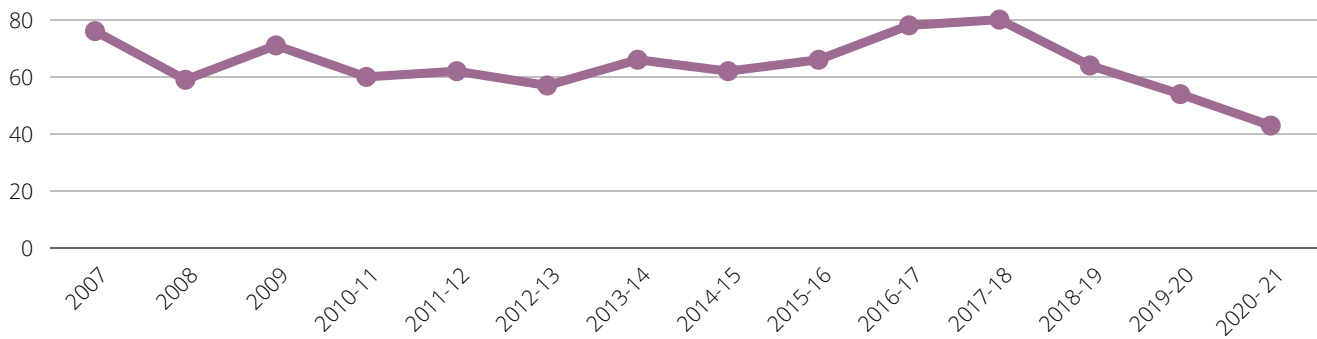
Comparative Data: Percent of School Forests Used by the Community



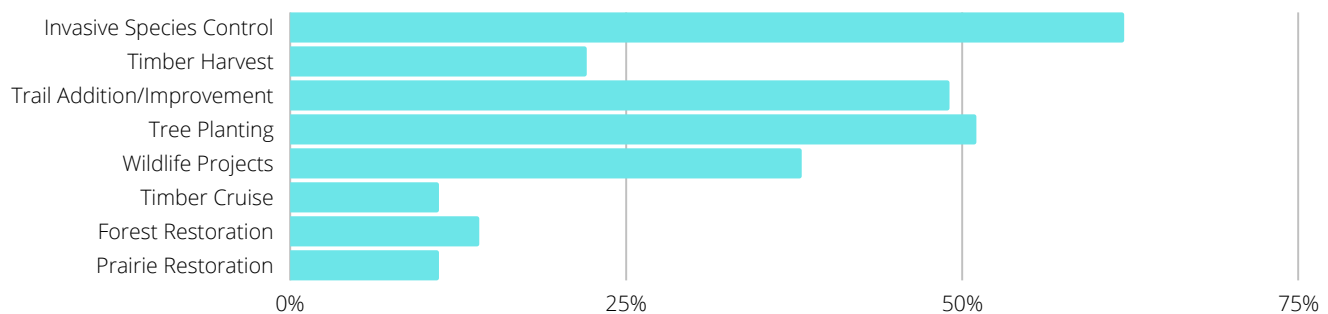
FOREST MANAGEMENT

- Sustainable forest management activities, lessons, events, or programs have occurred on 37 school forests, or 43% of the districts that responded.
- Thirty - seven people responded to **the type of sustainable forest management** that occurred in their school forest. Invasive species control and tree plantings were the most common management activities cited. Other management included prairie restoration, forest restoration, timber cruise, wildlife projects, trail additions or improvements, and timber harvests.
- 49% of the respondents indicated the **next management activity** would take place within the next year, 10% indicated 1-5 years, and 0% indicated more than 5 years. 41% of the respondents indicated a management activity but did not list a date for it to be completed. These results were impacted by the pandemic which led some to focus on their school forests and others unable to plan for management activities due to an unforeseeable end to the pandemic.

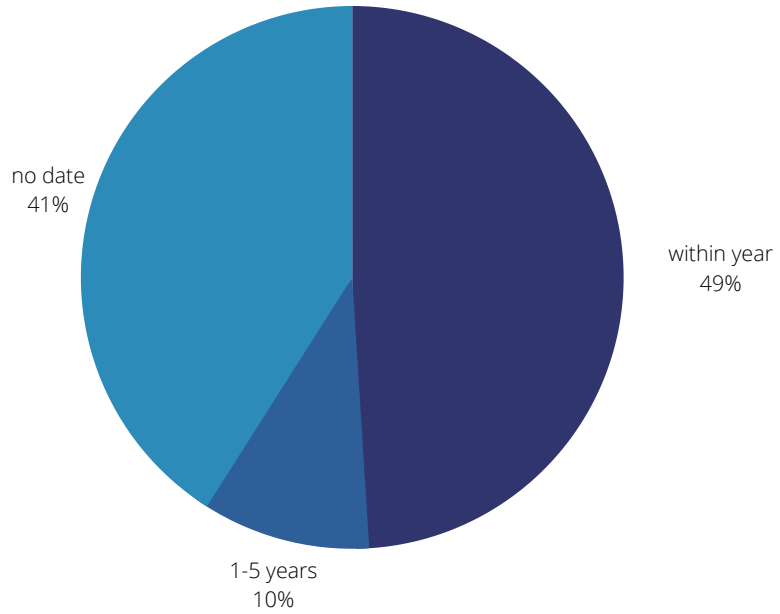
Comparative Data: Percent of School Forests that Implement Sustainable Management Activities



Forest Management Activities in the 2020-21 School Year (N=37)

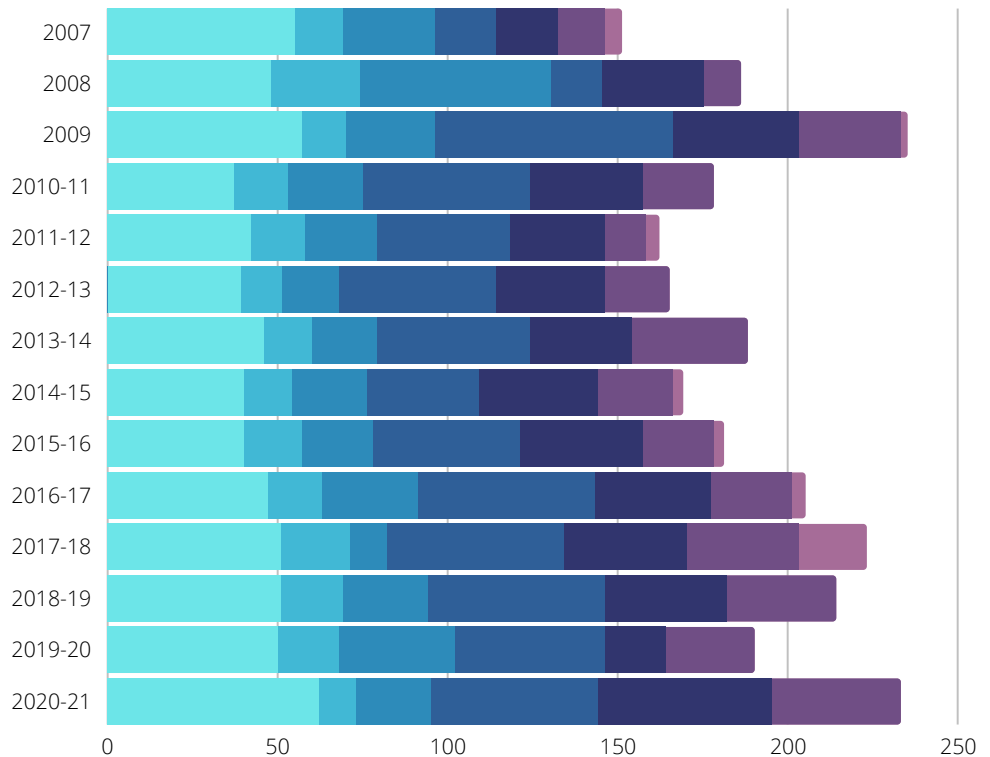


Anticipated Next Forest Management Activities (N=59)



Comparative data show that the most common management activities implemented at school forests are invasive species control and trail additions or improvements. However, this past school year showed a noticeable increase in the implementation of tree planting. Harvesting timber or preparing for a future harvest is a critical part of sustainable management at school forests and occurs at approximately 25% of the responding forests each year.

Comparative Data: Sustainable Management Activities on School Forests Each Year

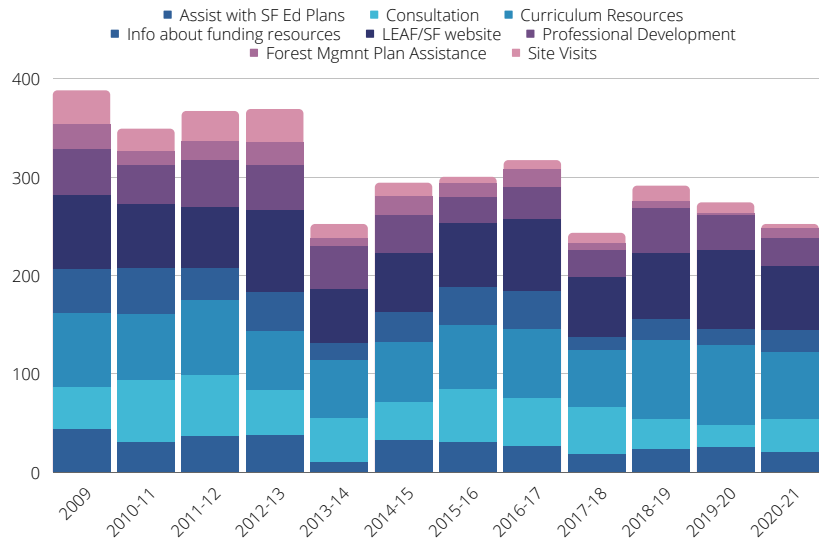


LEAF AND SCHOOL FOREST ASSISTANCE

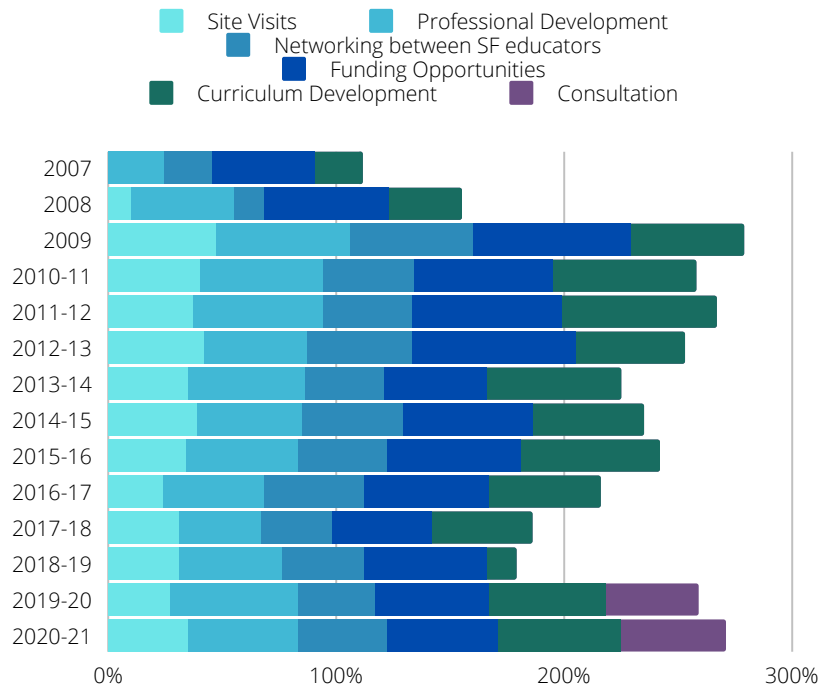
- The LEAF School Forest Program was indicated as helpful or has provided assistance to 46% of the school districts that responded to the 2020-2021 school forest survey.
- LEAF was most commonly stated to have helped with curriculum resources (68%), information via the LEAF/School Forest website (65%), consultation services (33%), professional development (28%), funding resources information (23%), assistance with school forest education plans (20%), assistance with forest management plans (10%), and school forest site visits (5%).
- School districts identified further assistance is needed with curriculum resources development (54%), school forest funding opportunity guidance (49%), staff professional development opportunities (48%), consultation with the School Forest Education Specialist (46%), networking between school forest educators (39%), and visiting school forest sites (35%).

Comparative data in the charts below indicate that school forest educators rely heavily on LEAF’s services and that there is still a great need for the services LEAF provides.

Comparative Data: Type of LEAF Assistance Utilized



Comparative Data: Type of LEAF Assistance Requested by School Forest Educators



SCHOOL FOREST PERSONNEL

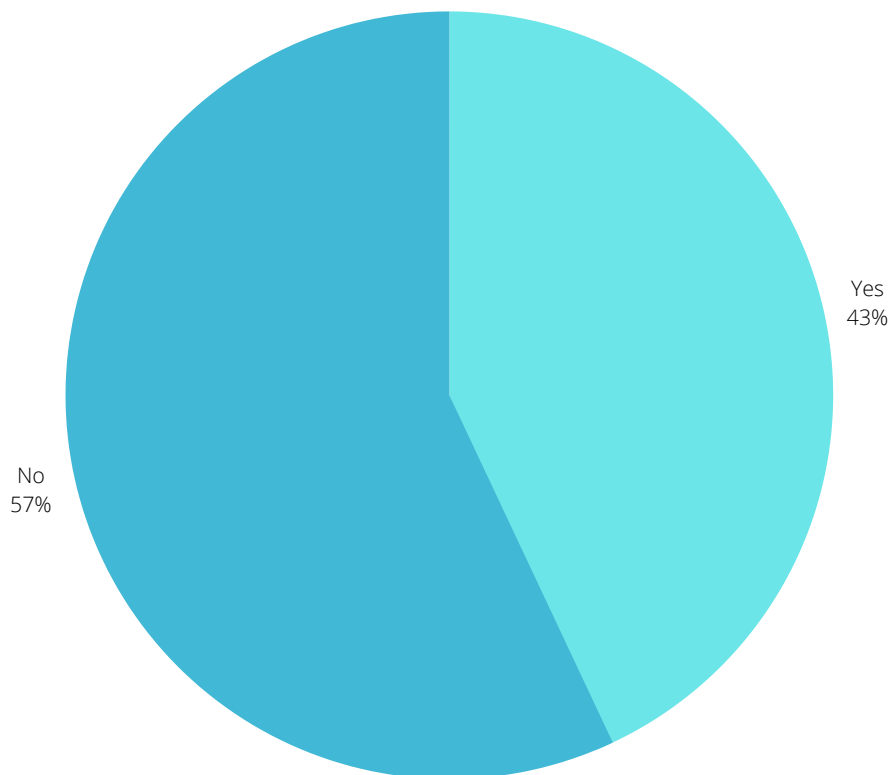
SCHOOL FOREST COMMITTEES

- Of those who responded, 43% of the districts have a school forest committee while 57% of the respondents do not have a committee.

Does the district have an official School Forest Coordinator or person in charge of school forest programming?

- 40% do have a school forest coordinator while 60% do not
- The position is a full-time paid position in 18% of the school forests that responded, a part-time position in 24%, and a volunteer position in 58% of the school forests.

Percent of School Forests with an Advisory Committee in 2020-21 (N=94)

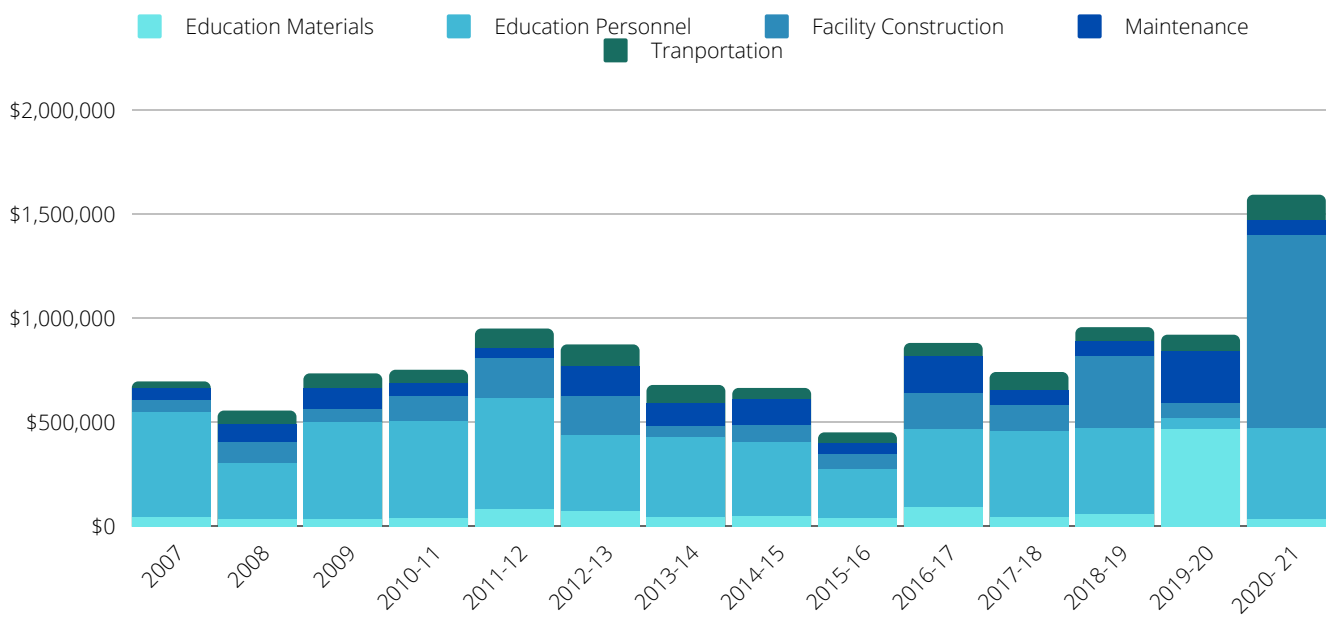


SCHOOL FOREST BUDGET

2020-21 SCHOOL FOREST EXPENDITURES

- The following school forest expenditures were reported on the survey:
- School districts spent a total of \$34,390 on education materials for their school forest programs. This calculates to an average of \$419 per school district that responded. School districts indicated a range of \$0 to \$11,000 was spent on educational materials for the school forest. 74% of the school districts reported that no money (\$0) was spent on school forest education materials.
- School districts spent a total of \$607,815 on education personnel for their school forest programs. This calculates to an average of \$7,150 per school district that responded. School districts indicated a range of \$0 to \$170,000 was spent on education personnel for the school forest. 82% of the school districts reported that no money (\$0) was spent on school forest education personnel.
- School districts spent a total of \$1,721,517 on facility construction for their school forest programs. This calculates to an average of \$19,787 per school district that responded. School districts indicated a range of \$0 to \$800,000 was spent on facility construction at the school forest. 87% of the school districts reported that no money (\$0) was spent on school forest facility construction.
- School districts spent a total of \$88,626 on maintenance for their school forest programs. This calculates to an average of \$1,018 per school district that responded. School districts indicated a range of \$0 to \$15,000 was spent on maintenance at the school forest. 66% of the school districts reported that no money (\$0) was spent on school forest maintenance.
- School districts spent a total of \$221,082 on transportation for their school forest programs. This calculates to an average of \$2,541 per school district that responded. School districts indicated a range of \$0 to \$100,000 was spent on transportation to and from the school forest. 74% of the school districts reported that no money (\$0) was spent on school forest transportation.

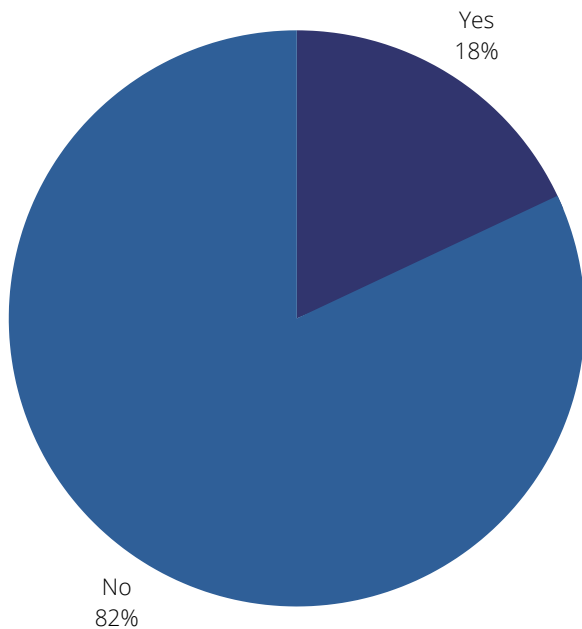
Comparative Data: School Forest Expenses Reported Each Year



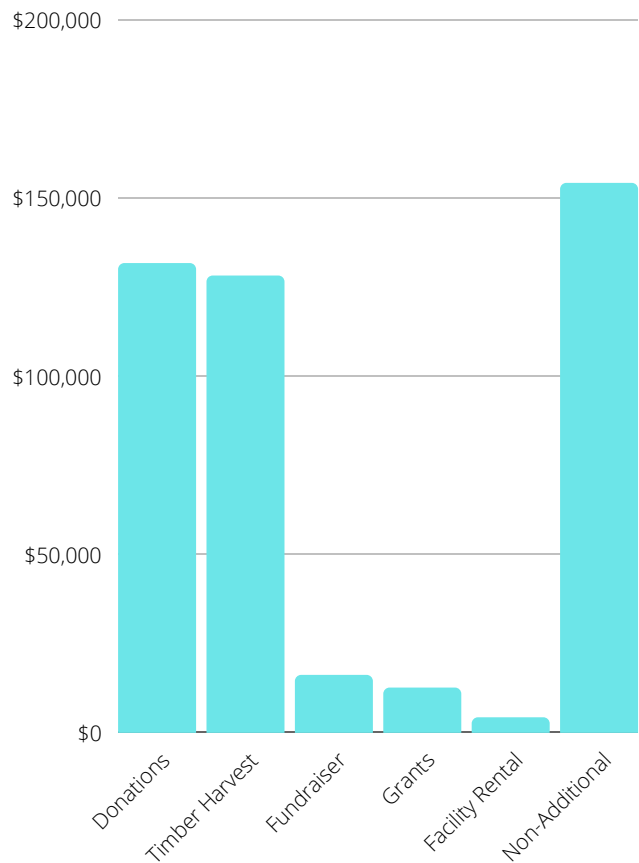
2020-21 SCHOOL FOREST INCOME

Eighteen percent (18%) of the school districts in the survey reported their school forest had generated income in the 2020-2021 school year. A combined total of \$469,248 was generated from school forest land or programming. Income from the school forest was generated from the following categories: timber sales occurred at thirty-three percent (33%) of the forests and generated about \$128,092; twenty-seven percent (27%) of the school districts generated money for their school forests through fundraisers and raised a total of \$15,998, thirty-three percent (33%) of the districts generated \$131,591 through donations, seven percent (7%) of the districts raised money through facility rental resulting in a total of \$4,095, and twenty-seven percent (27%) of these districts reported gaining \$12,437 through grants.

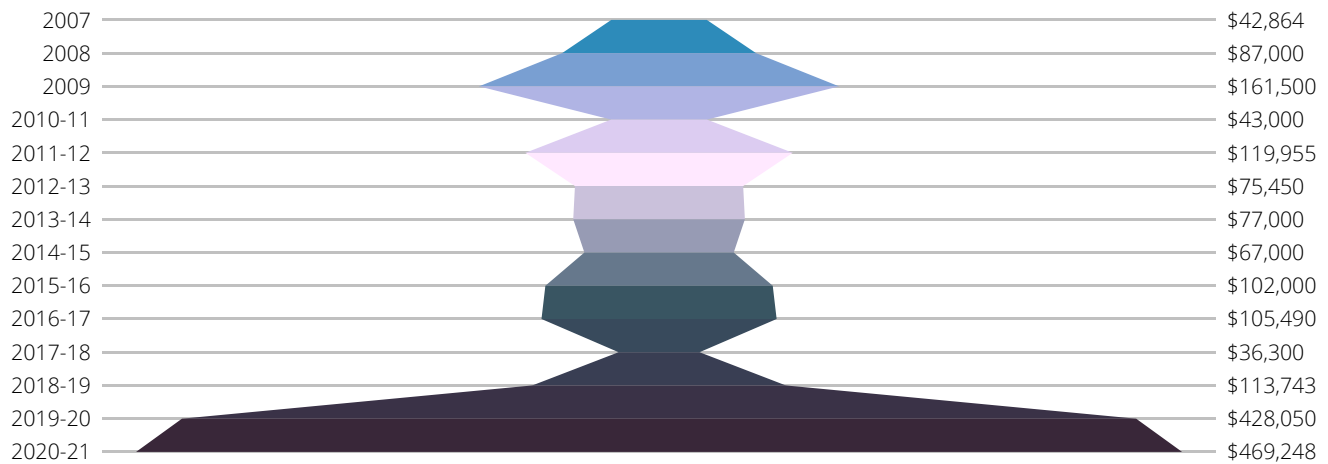
School Forests That Generated Income in 2020-21



Income Reported by School Forests for the 2020-21 School Year



Comparative Data: Total Timber Sales Revenue Reported

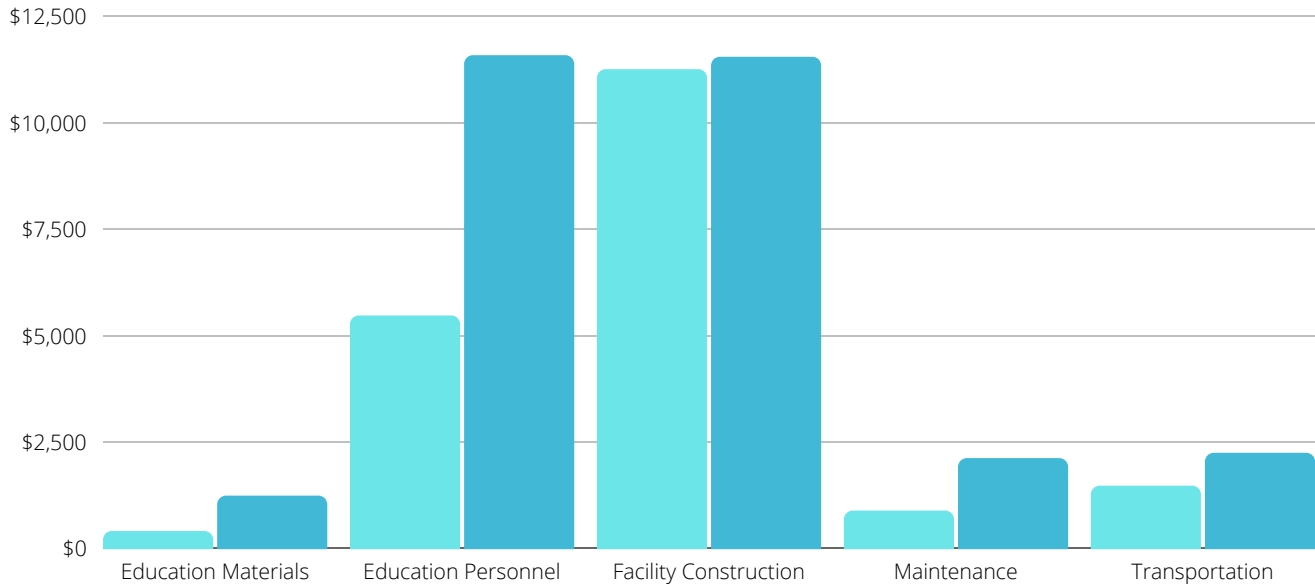


INDICATORS OF SCHOOL FOREST SUCCESS FOR 2020-21

The following information is what school districts indicated would be their desired annual budget for school forest programming:

- School districts would like a range of \$0 to \$15,000 to spend on **educational materials** for their school forest programs. The grand total desired for school forest education materials from all the districts that responded is \$116,125. This calculates to an average of \$1,382 per school district that responded.
- School districts would like a range of \$0 to \$230,000 to spend on **education personnel** for their school forest programs. The grand total desired for school forest education personnel from all the districts that responded is \$1,178,200. This calculates to an average of \$14,026 per school district that responded.
- School districts would like a range of \$0 to \$50,000 to spend on **facility construction** for their school forest programs. The grand total desired for school forest facility construction from all the districts that responded is \$1,445,150. This calculates to an average of \$17,204 per school district that responded.
- School districts would like a range of \$0 to \$20,000 to spend on **maintenance** for their school forest programs. The grand total desired for school forest maintenance from all the districts that responded is \$191,150. This calculates to an average of \$2,303 per school district that responded.
- School districts would like a range of \$0 to \$100,000 to spend on **transportation** to and from their school forest programs. The grand total desired for school forest transportation from all the districts that responded is \$283,500. This calculates to an average of \$3,375 per school district that responded.

School Forest Budget: 2020-21 Average Spent vs. Desired Budget



**THANK
YOU**

**THIS REPORT WAS
PREPARED BY:**

**BETHANY
SLEMBARSKI
(2022)**



**LEAF - Wisconsin's K-12 Forestry Education Program
College of Natural Resources
University of Wisconsin-Stevens Point**

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