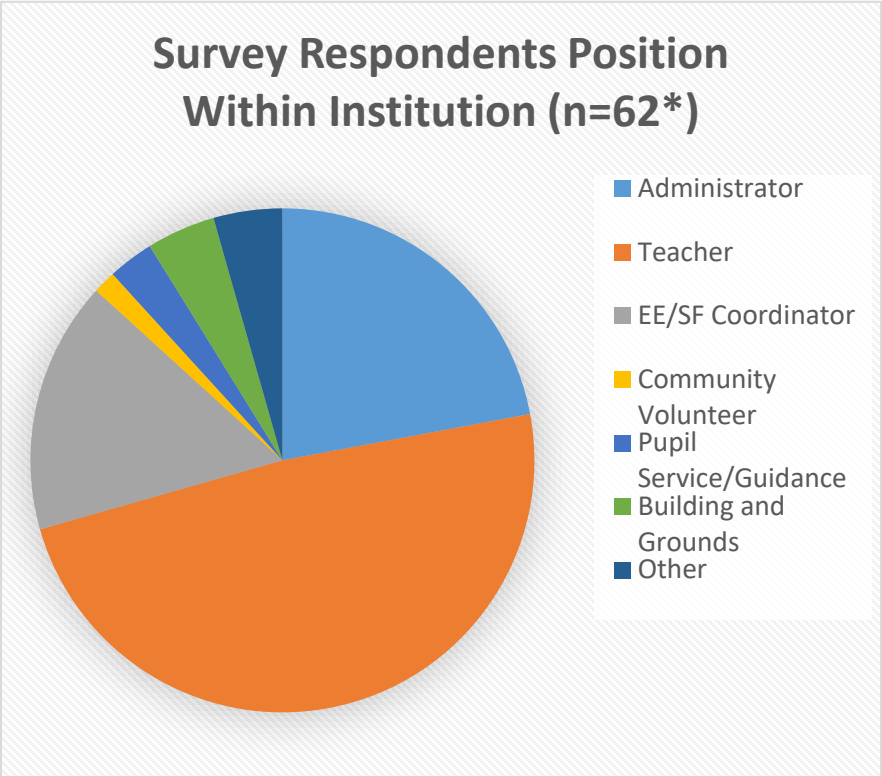
2023-24 Annual School Forest Survey Results

The Annual School Forest Survey serves as a "snapshot" of school forest activity in Wisconsin, not as a comprehensive report. Since not all school forests submit data and not all of the same school forests submit data every year, we can observe general trends throughout certain questions that were asked in the survey. One should not assume that these are precise and final numbers. This report is merely a representation of Wisconsin's School Forest Program over the 2023 – 2024 school year.

Response Rate:

Sixty-three individual schools or districts provided responses to the survey out of 255 individual schools or districts that received the survey. Sixty-one responses were received from 60 public school districts, 2 private schools, and no higher education institutions. Two responses came from the same district and one survey was basically blank. This is a 24% response rate (n=62). The survey was sent to 243 public schools, 7 private schools, and 5 higher education institutions with registered school forests. Overall, it was distributed to over 375 contacts within the school forest database.

The respondents included: Abbotsford, Adams-Friendship, Athens (Maple Grove), Beecher-Dunbar-Pembine, Bowler, Butternut, Cambridge, Campbellsport, Cedarburg, Chequamegon, Chippewa Falls Area Unified School District, Edgerton, Elcho, Genoa City Joint 2 School District, Green Lake, Gresham, Hilbert, Holy Hill, Kiel, LaCrosse, Laona, Lodi, Luck, Marathon, Marion, Marshfield, Mercer, Merrill, Middleton-Cross Plains, Milwaukee, Mishicot, Mondovi (Anthony Acres), Montello (High Marq), Niagara, Nicolet Union High School, Northland Pines, Osseo-Fairchild, Owen-Withee, Princeton, Random Lake, Rhinelander, Rice Lake, River Valley, Riverdale, Solon Springs, Southern Door County, Stevens Point Public School District, Suring, Trinity Lutheran School, Turtle Lake, Verona, Wausaukee, Weyauwega-Fremont, White Lake, Whitnall, Wild Rose, Winter, Wisconsin Dells, Wisconsin Rapids and Wonewoc--Center.
Interestingly 84% or 53 of the respondents that participated in the survey this year also did so last year. That means that 16% of the school districts that responded were different from last year's participants. Fifty-eight of the respondents that completed the 2022-23 survey last year did not fill it out this year. The 2022-23 School Forest Survey saw a record 111 respondents. It is possible that the high number last year stemmed from the end of the COVID-19 pandemic which is thought to have led to more outside instruction for social distancing. Perhaps this also led to better returns on this survey.



Survey Respondents:

Administrator = 15
Teacher = 33
EE/SF Coordinator = 11
Pupil Services/Guidance Dept. = 2
Community Volunteer = 1
Building & Grounds Coordinator = 3
*Note: some held multiple titles

GRADE LEVELS TAUGHT or Administered:

Early Childhood: 2
Elementary: 10
Middle School/Jr High: 16
High School: 19
All: 15

SUBJECTS/CLASSES TAUGHT:
All subjects: 15
Specialty Areas:
Art: 2
Agriculture Education: 11

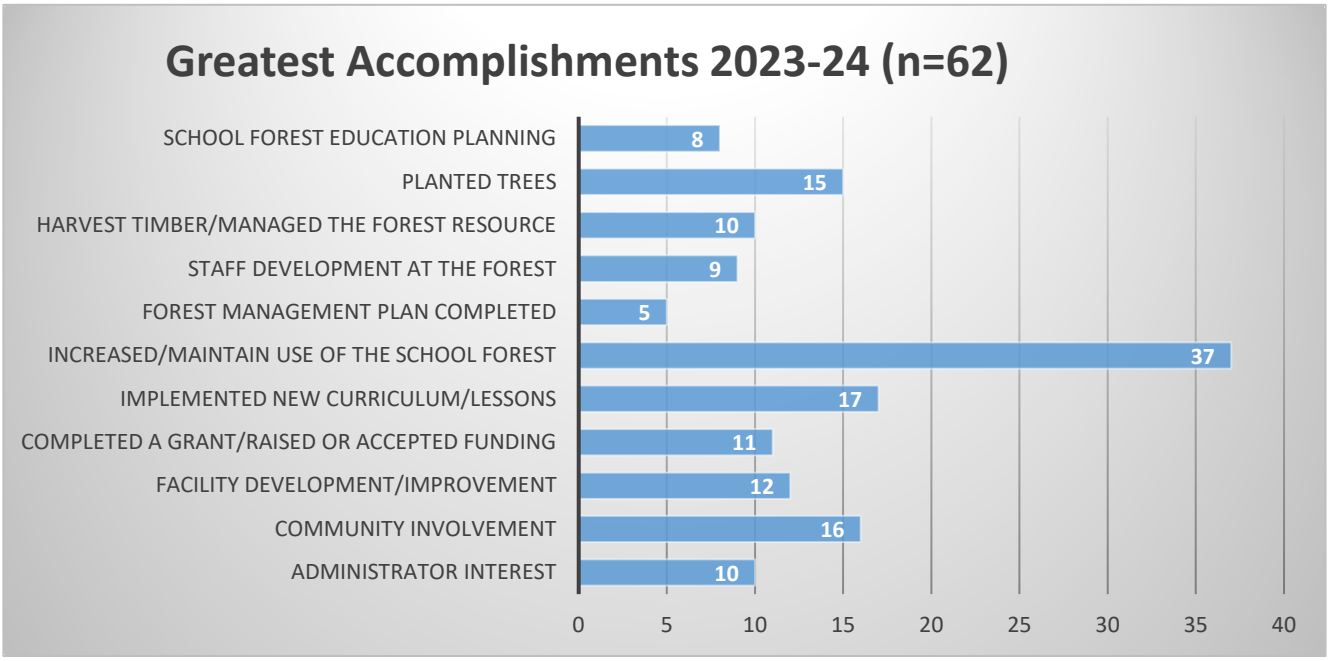
English: 1
Environmental Ed: 2
Math: 0
Physical Education: 2
Science: 14

Social Studies: 0
Special Education: 0
Technology Education: 3
Other: 2 (PBL, outdoor educ, enrichment activities; language)

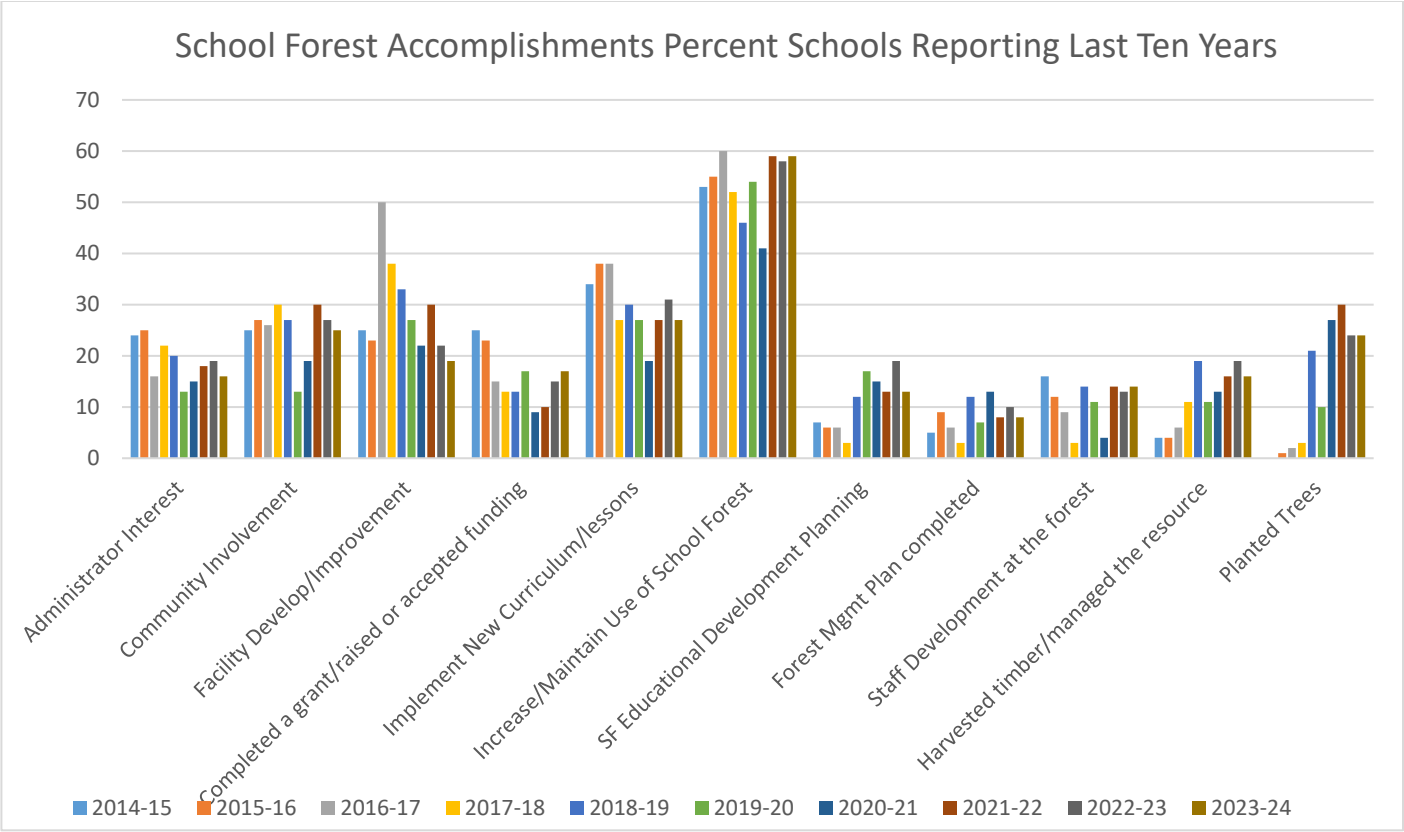
School Forest Success:

Greatest School Forest Accomplishments

Responses indicating the **district's greatest school forest accomplishments** in the 2023-24 school year: Administrator Interest - 16%, Community Involvement-25%, Facility Development/Improvement-19%, Completed a Grant-17%, Implemented New Curriculum-27%, Increased use of the School Forest-59%, School Forest Educational Development Planning-13%, Forest Management Plan completed-8%, Staff Development Opportunities-14%, Harvest Timber /Managed the Forest Resource-16%, and Planted Trees-24%. The chart below indicates numbers reported.

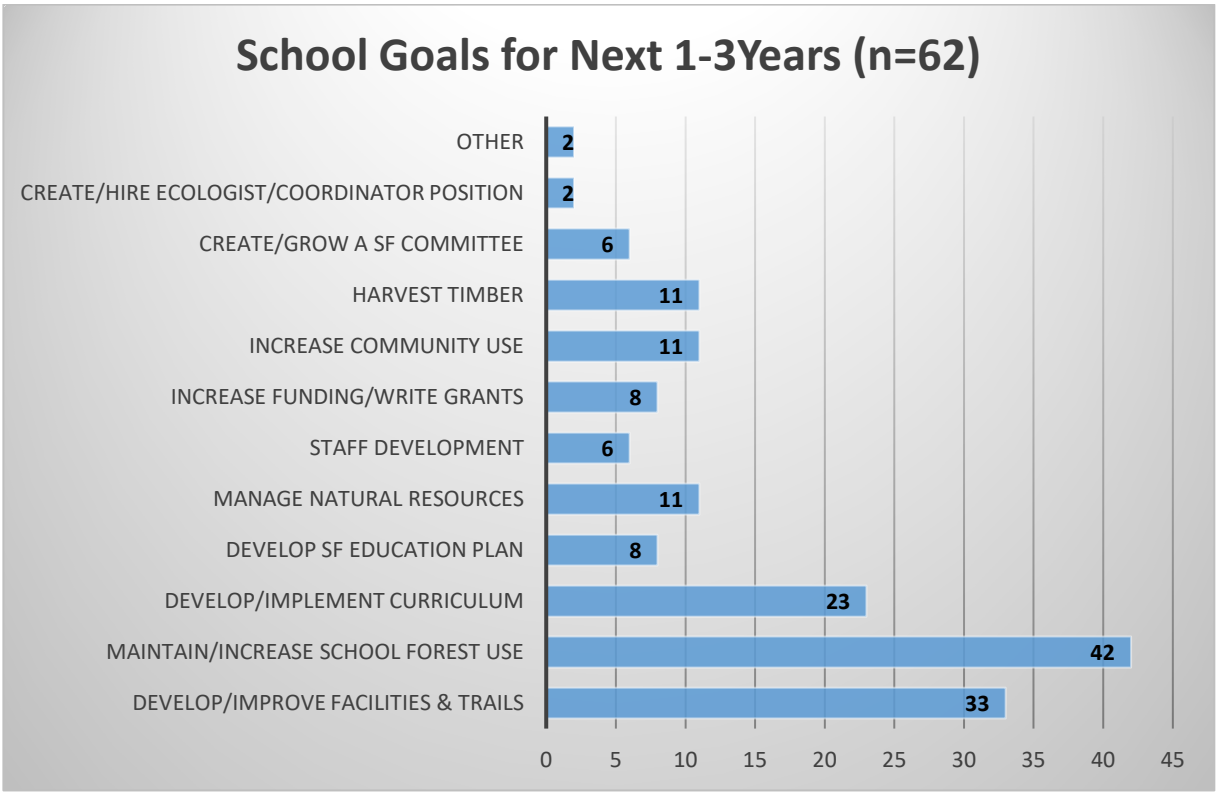


The **comparative data** figure below, shows which school forest accomplishments were identified over the past 10 years. Certain trends have begun to emerge with the challenge of increasing or maintaining the use of the school forest as the top accomplishment recognized by school forest programs across the state. Other top accomplishments include implementing new curriculum or lessons and community involvement at the school forest. Tree planting has been more frequently reported with five of the last six years greater than 20%.



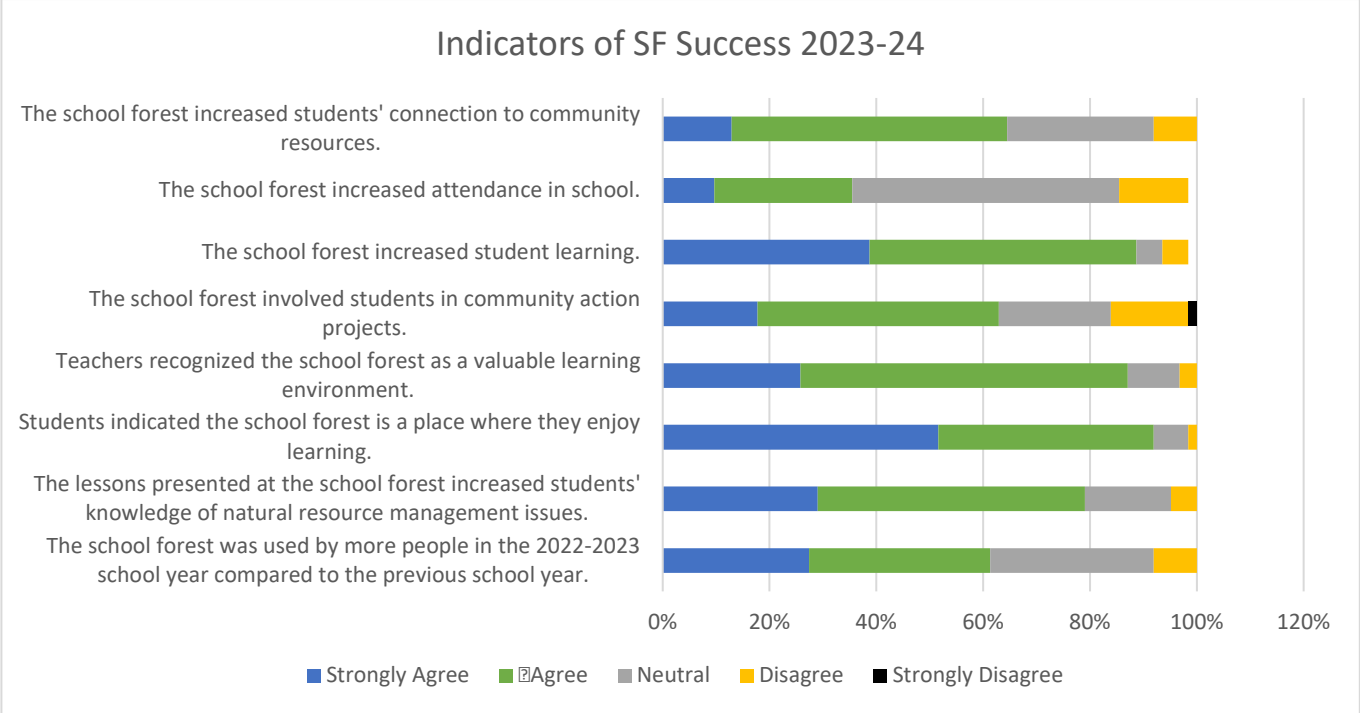
Goals for the next 1-3 years

The main school forest goals cited by the schools for the next three years were to to maintain or increase the use of the school forest, develop or improve the 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 63 respondents.



Indicators of school forest success for 2023-24

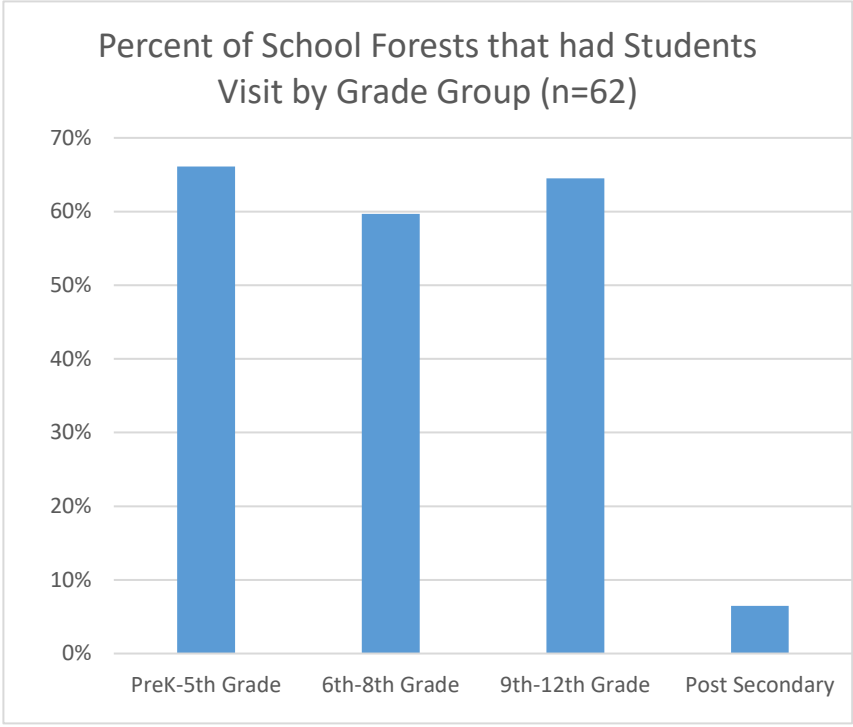
Sixty-two (62) schools responded. Results are listed as percentages.



School Forest Utilization during the 2023-24 School Year:

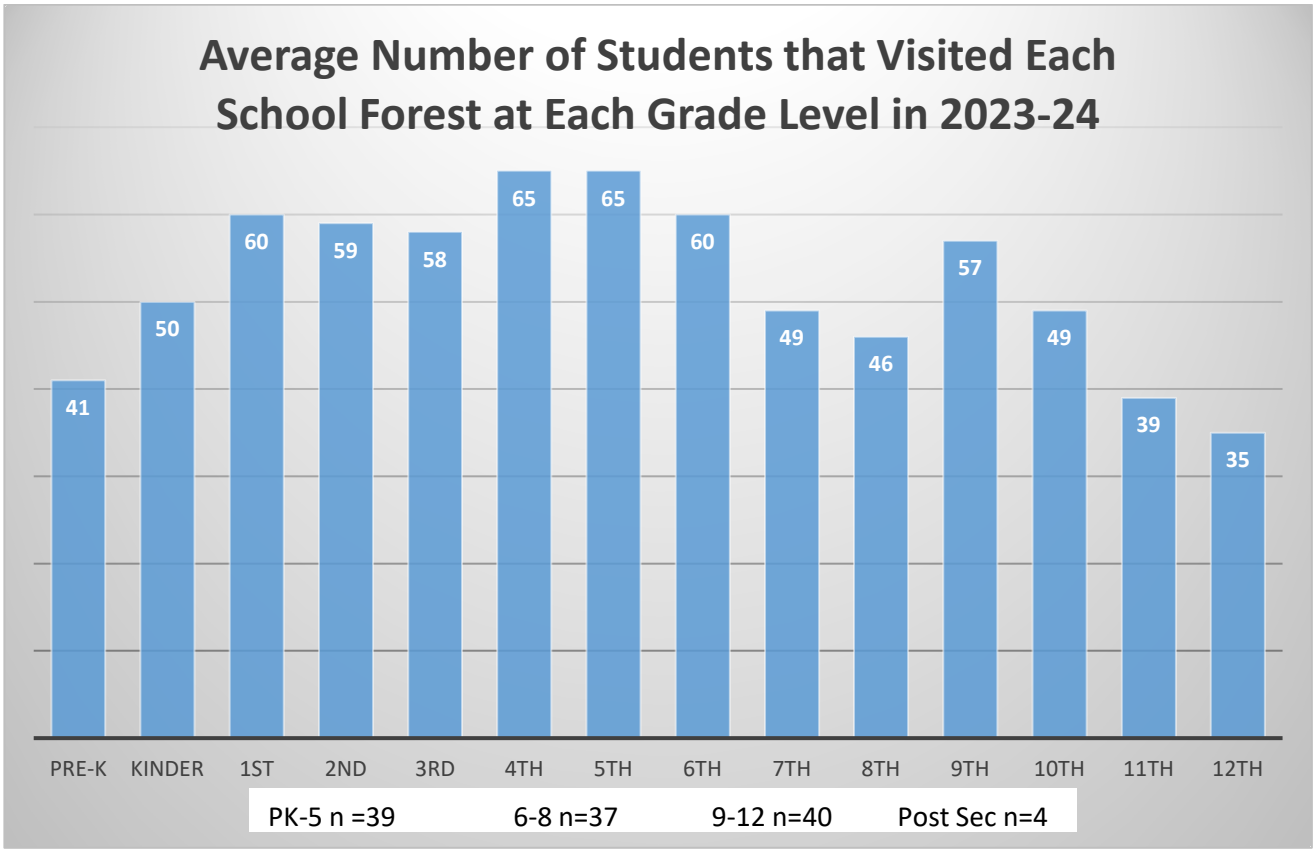
Student Visits

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

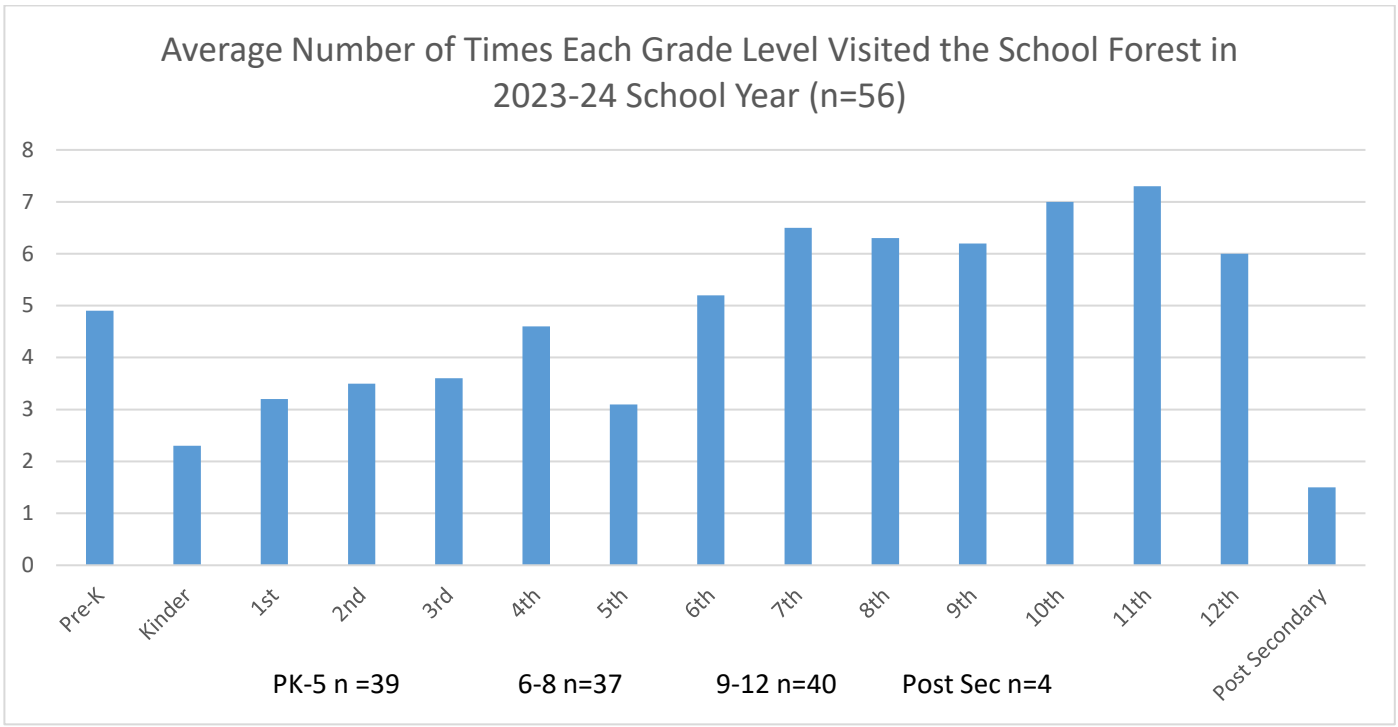


- **School Forest Use.** Respondents indicated that 66% of the forests had visits from PreK-5th grade students, 60% had visits from 6th-8th grade students, 65% had students in 9th-12th grade that visited, and 6% had post-secondary students.
- **Number of Students.** A total of **28,658 students** visited school forests during the 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.

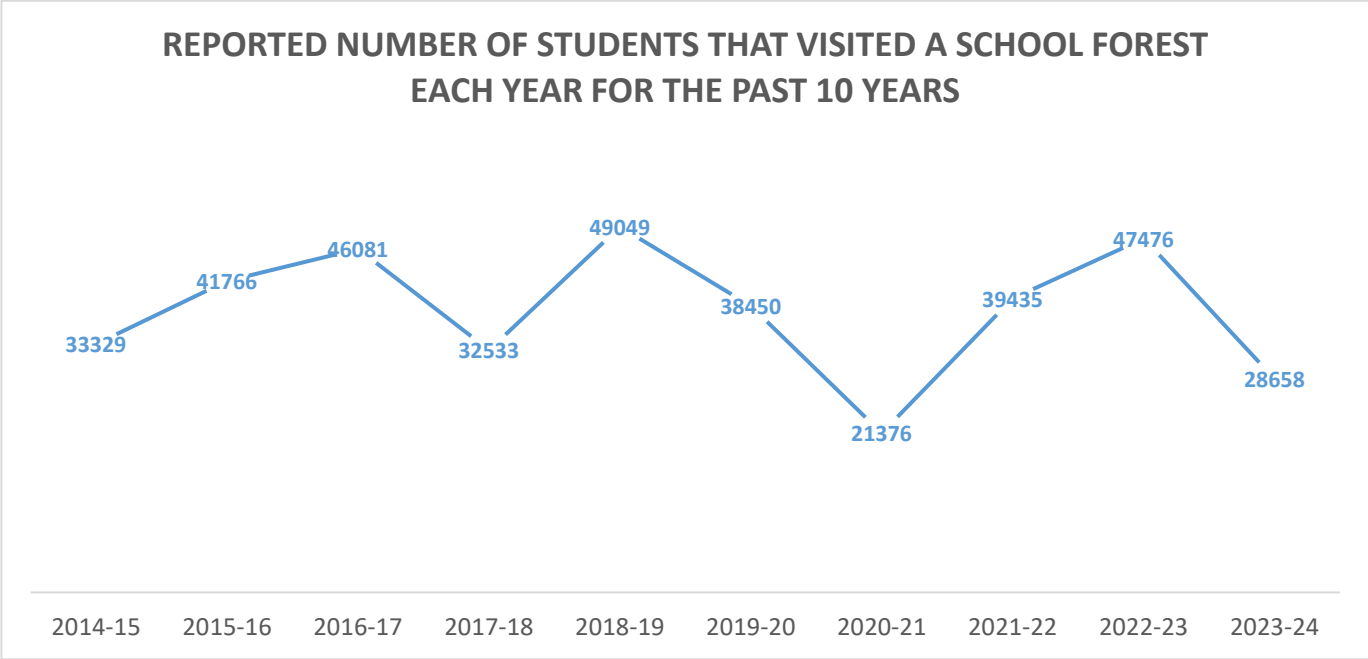
  * The number of students per grade level reported is as follows: 1605 Pre-Kindergarten, 1953 Kindergarten, 2342 1st grade, 2316 - 2nd grade, 2279 - 3rd grade, 2252 - 4th grade, 2547 - 5th grade, 2218 - 6th grade, 1820 - 7th grade, 1689 - 8th grade, 2267 - 9th grade, 1964 - 10th grade, 1558 - 11th grade, 138866 - 12th grade, and 162 Post Secondary students.



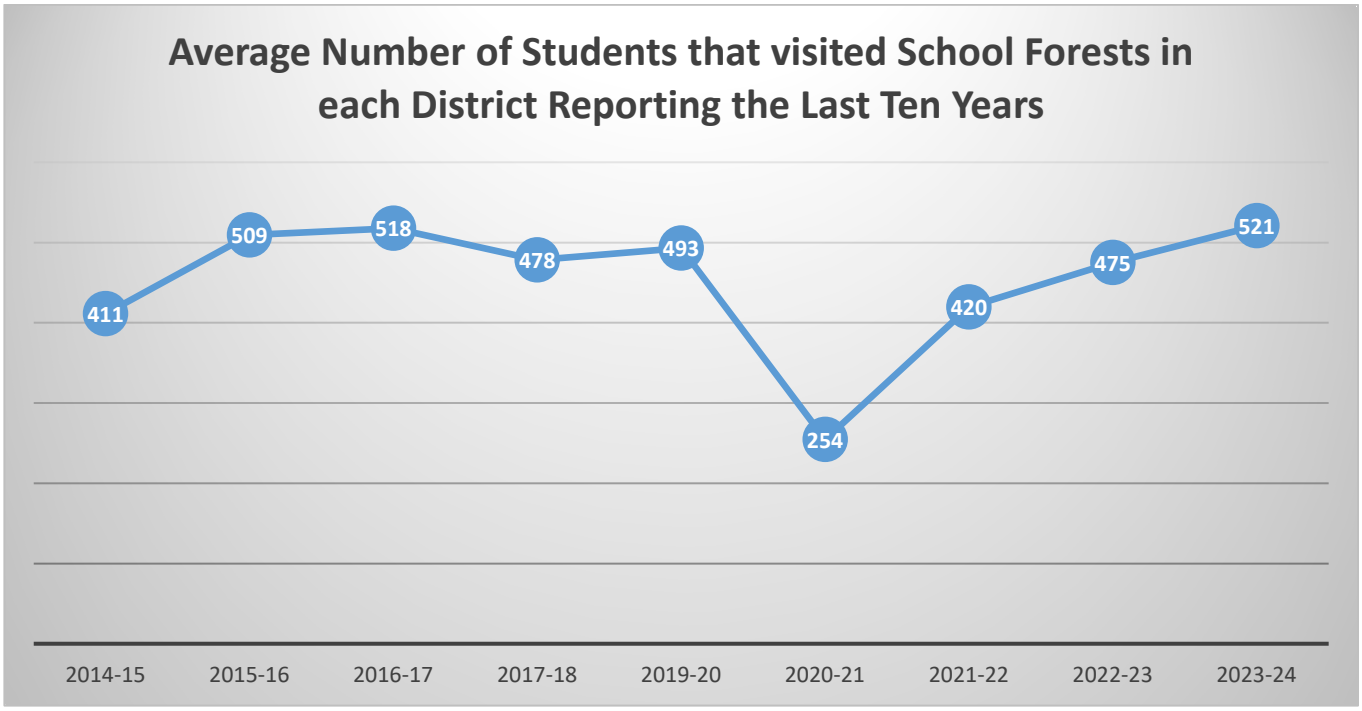
- **Number of Trips.** Respondents reported a total of **3,977 field trips** to school forests in Wisconsin. The **average number of times** (trips) each grade level visited the school forest can be seen in the chart below.



Comparative data regarding the total number of students who visited school forests each year is a **minimum estimate** of the actual number of students who visited. This figure is calculated from the survey results submitted by school forest educators, however, it is known that not all schools who had students at the forest completed the survey.

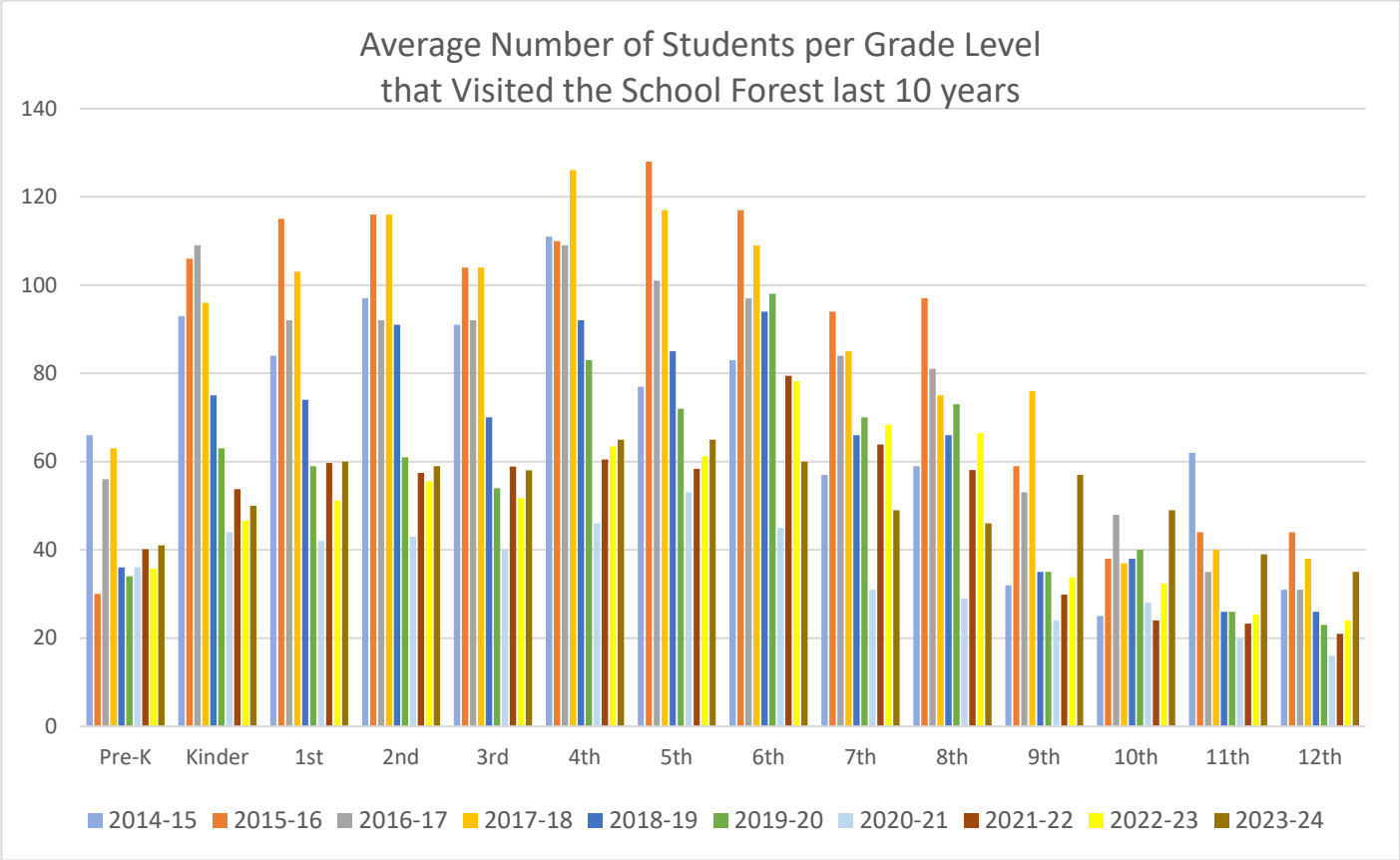


A graphic that enables for more meaningful comparison has been added this year. We have calculated the average number of students that visited per district reporting. This helps to compensate for the year to year variability in number of survey respondents. Results are in the figure below. Clearly, there was a decline in school forest use during the pandemic as students learned from home. Numbers have rebounded to the highest level in the last 10 school years.



Comparative data below show a trend in the decrease in the number of students that visit the forest as they increase in age. Middle and high school class schedules limit the amount of time a teacher can spend with each student and many teachers are not able to make it to the forest and back during the bell schedule with their class. Another difference is high

school students are visiting the school forest with a specific course and not necessarily as an entire grade-level as is common in the elementary grades.



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 during student field trips at the school forest.

- I have only informal examples that come from students sharing insights. More and more they talk about how what we do or learn about in the woods relates to something at home, or on Grandpa's farm or Grandma's garden or Auntie's woods. They are connecting our woods to their personal lives and understanding how plant and tree life works everywhere. I find this encouraging. They are thinking at a deep level of understanding "how Earth works."
- High school environmental science classes completed individual PBL conservation projects
- Everything this year is informal due to it being our first year. We had 3 structured outings for 4k-3rd and listening to conversations afterward showed an increased awareness of the forest and its importance. It also showed a newer level of stewardship.
  Emails received from families about what their 'scientist' said or noticed while outside of school time also confirms learning/stewardship. Stories shared by scientists themselves about "saving" things and removing invasive plants are more common.
- High School students lead a tour of the forest with the 4th grade class this spring. Students were challenged to identify trees utilizing a Dichotomos Key.
- Our school forest is used by almost all students/staff kindergarten through 12th grade for student learning.
  1. HS Biology is working with the DNR on wildlife identification through the use of game cameras being placed in the forest.
  2. Students and staff in all grades use the forest for part of our science curriculum.
  3. Physical Education classes use the forest for aerobic activity as well as for survival activities in their curriculum.

- Our Don Kircher Day was amazing and brought a ton of community members together. The students and staff learned about Don's impact on our school and the forest. We dedicated a sign to him and had numerous science activities at the forest and at school.
- "This is the most peaceful I have ever felt at school" - Lodi 6th grader
  "Poetry is so easy when you are in the woods" - Lodi 6th grader
  "I want to go to the forest every day" - Lodi 2nd grader
- 1. We planned and held the first annual Earth Day event at the school forest. I observed students at the event. There were several formative assessments done during the event. Stations included:
  -Iron County Land and Water Conservation: Conservation/recycling (students were able to name how long different items (plastic bags, paper bags, diapers) would take to degrade if left in the forest. Students were also shown the impact of water runoff using a simulation. Students were able to respond to questions about the impact of pollution from various sources-litter, animal waste from farms, air pollution.
  2. Students researched and created interpretive signs for the school forest.
  3. We partnered with the Mercer Public Library to host a StoryWalk in the school forest. One story in particular, Over and Under the Snow by Kate Messner, illustrated by Christopher Silas Neal, taught about how animals in the forest survive during the winter. StoryWalk events included a New Year's Storywalk complete with S'mores by the campfire and a wood fire and hot cocoa in the yurt.
- Students conducted timber surveys and tapped maple syrup in 2023
- Students that normally don't perform well in traditional classroom setting thrive in the forest, they are more interested, calmer, ask more questions and smile more.
- "Will we be able to smell the wild onion (ramps) in the fall like we did in the spring?" - RL 1st grader
  Connecting past experiences with anticipated future experiences
  "How come there are so many Trilliums and Spring Beauties growing in the forest? Did someone plant them here?" - RL Kindergartner observing the changes of different ecosystems
  "The water will drain from the concrete like surface more quickly than the sand and gravel surface. Slowing the water down will create cleaner bodies of water. You can add detention ponds, mimic natural bends in creeks and waterways, plant sedges/rushes/grasses along the embankment, or add rip-rap to hold the water in place." - RL 8th grader after walking the trails and discussing erosion mitigation with these methods at the RDNC
  "Snowshoeing is hard work, but I know I my muscles are growing when my leg are tired. We should be proud of each other and our hard work!" - RL 4th grader after snowshoeing through the forest
- We planted 1300 trees in our school forest this year as several of last years saplings died during our drought last year. We also did several practice timber cruises and tree ID in forestry class. Hosted a Food For America program that taught 4th and 5th graders how to plant and identify trees.
- We have begun a multi-year school forest sculpture walk that includes interactive sculptural pieces made from natural materials.
- Our plans to bring the elementary students to the school forest this spring were cancelled due to severe weather. We moved our educational booths to the school gym and the result was awesome. Students loved the interactive activities. They also learned so much about the wildlife. The educational booths were created by my forestry and wildlife students. They provided the education from their perspective. It was great for both groups of students.
- From our maintenance dept: We haven't planted any trees but we have cut a lot of the invasive bushes like Buckthorn
  From our FFA teacher:This year I did the following in our school forest:
  The HS Wildlife class completed observation journals based on our school forest. They recorded wildlife animals, birds, plants, weather, other key features, etc. (I wish I would have kept a copy to share)
  Outdoor Recreation utilized the hiking trails as well as playing Disc Golf on the course through the woods
  The 8th grade agriculture course collected pine cones and red twigs to utilize in Christmas centerpieces and wreaths.
  From our HS Phy Ed teacher: we walked the trails for Phy Ed class
  From our 4K teacher: we used the school forest every Wednesday. Both 4K classes (48 students total) walked the trails, made observations, learned about seasonal changes, discovered tracks and animals, monitored trail changes, had opportunities for gross motor development, had opportunities for exploration, curiosity, risk, challenge, adversity.
- We have had two seniors that have gotten very involved with our science program and help write scholarly articles that have been published.

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 37 (or 60%) of the schools that responded. The following examples are a shortened list that indicate how the school forest was used to help students understand the economic, social, or environmental impact it has in the local community.

- 400 trees were planted and plans are being created in bringing students in on the management decisions in the school forest.
- The science class did a whole lesson about the environmental and endangered species. this is an area for woods turtles that I have been told they have been see there. Our science teacher is doing a study on turtle populations. The middle school and 4th grade did some lessons on the Wisconsin economy and the local logging with their study of Wisconsin history
- Students understand that the school forest is open to the public and some families have used the hiking trails on the weekends.
- We do a forester lesson with kids and we talk about the value of trees as habitat, carbon sequestration, and monetary value.
- Forestry class and MS Art collaborated on a large dragon sculpture made out of logs that were inoculated with lion's mane mushroom spore plugs.
- Our forest is student managed.
- The DNR forest planting plan was taken into effect. 3,000 White Oak, Red Oak, and Black Cherry were planted in the 4 acres of dedicated school forest and additional trees were planted in the Northern Prairie. The first 1,000 were planted by 4th grade classes and the HS Forestry class. Two high school students led a team of 4-5 4th graders to plant trees. They calculated the number of trees and species diversity that they planted and brought the data back to the classroom to create graphs in spreadsheets as an introduction to excel.
  1,500 trees were planted with community volunteers and friends of the River Doc Nature Conservancy.
  A UW- Eau Claire Barron class visited with their professor to study the spring ephemeral wildflowers, help strategize for the tree planting project, and deliver a bat house and a bird house.
  Several girl scout and boy scout troops have been brought to the RDNC for camp fires by the cabin along Lake Desair. Homeschool groups have visited the mud kitchen and hiked the trails.
- Students have studied the Ecology aspects of our forest and helped develop Habitat management plans.
- 1. We ran a family 5K event that used the school forest as part of the course.
  2. We are involved in writing a grant to help remove invasive species located in our school forest.
  3. A pair of Boy Scouts completed a project for their Eagle Scout award within our school forest area.
- The school forest is along the lake that is the major economic driver of our community. Students learn about the economic impact of land use in the watershed.
- Gr. 4 each student chose a tree to learn more about, do seasonal portraits of, figure height and age, and learn about carbon sequestration. They made a timeline on which they put their trees and correlated to other local history and learned that even a small woodland helps with climate change by sequestering carbon. Gr. 1-2 and 3 planted a pollinator garden for both adult butterflies and caterpillars and all bees welcome. And Gr 3 used cup plant stalks from our prairie to build a pollinator hibernaculum and /or nursery for bee species in woods near vegetable garden and new pollinator garden.

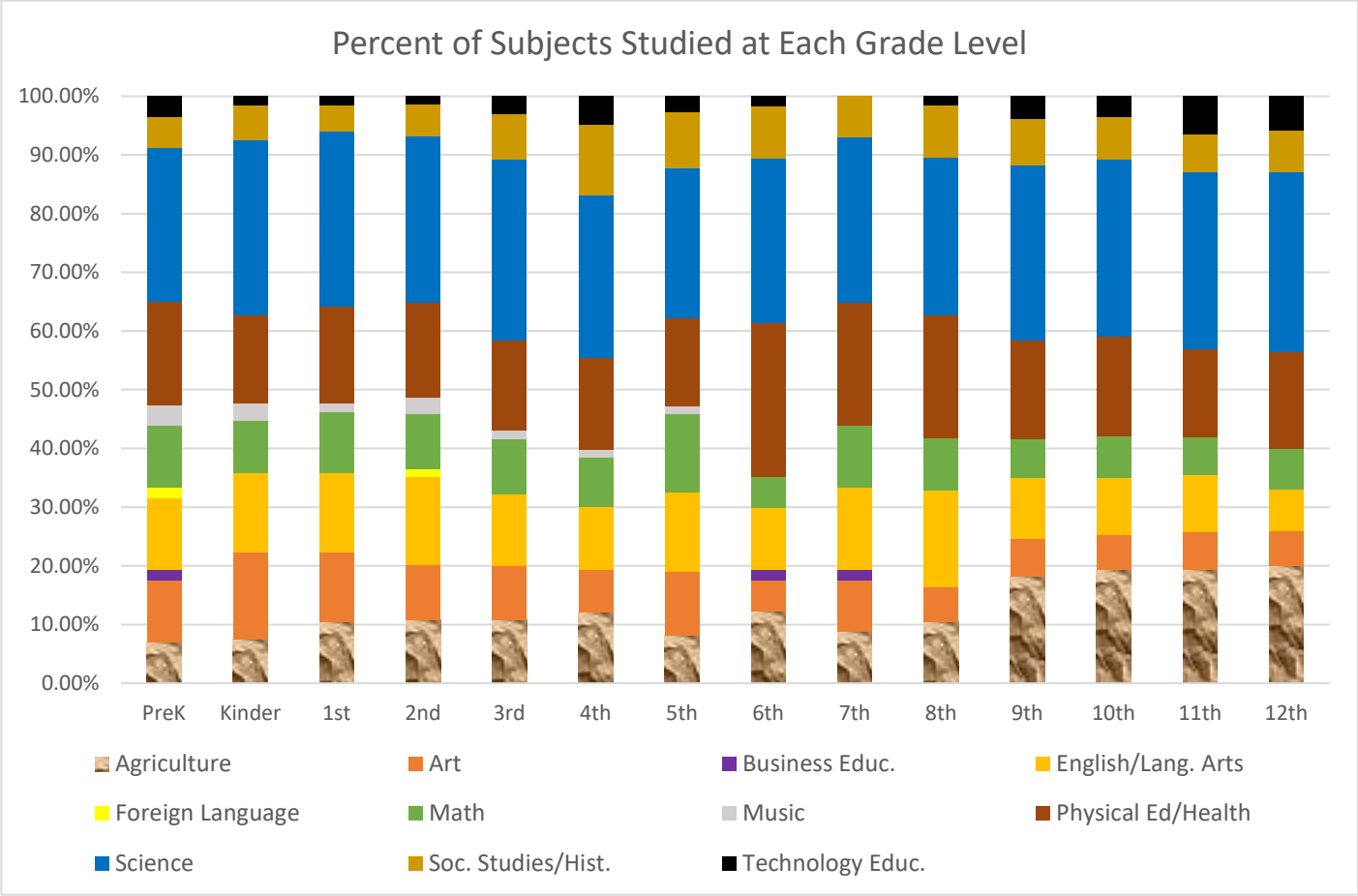
Products created from school forests…

Eight (8) of the 62 school forests (13%) 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 firewood, maple syrup, benches, and bird houses. Maple Syrup was produced in 5 of the 8 respondents' school forests.

Subjects Covered by Lessons at the School Forest

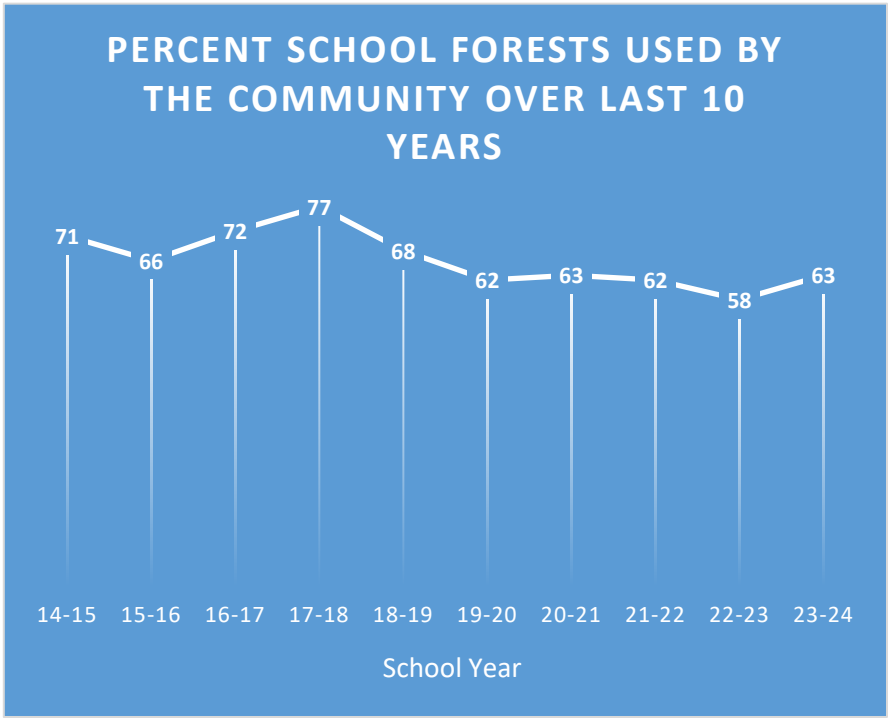
Respondents identified which **subjects were covered in lessons** students learned about while at the forest. Respondents could choose from the options found on the charts below. The following chart shows a comparison of the subjects covered throughout each grade level. Science is the most learned subject at the school forest for all grade levels followed by Physical Education. Agriculture and English-Language Arts were the other two subject areas with greater than 10% overall

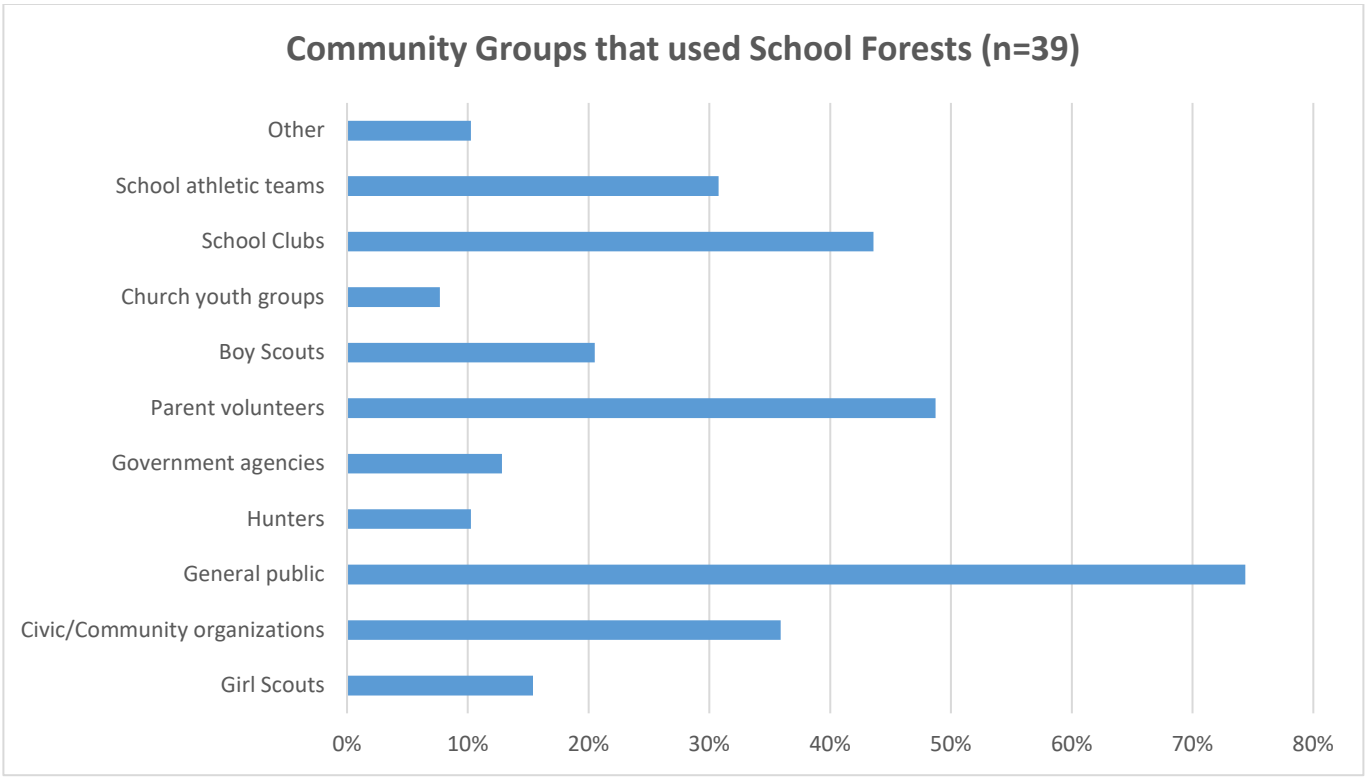
coverage at most grade levels. All subjects surveyed were covered by at least one grade level. This supports the principle that school forests are not only a place to learn about the forest resource itself, but are also places where students can learn about many other subjects and concepts.



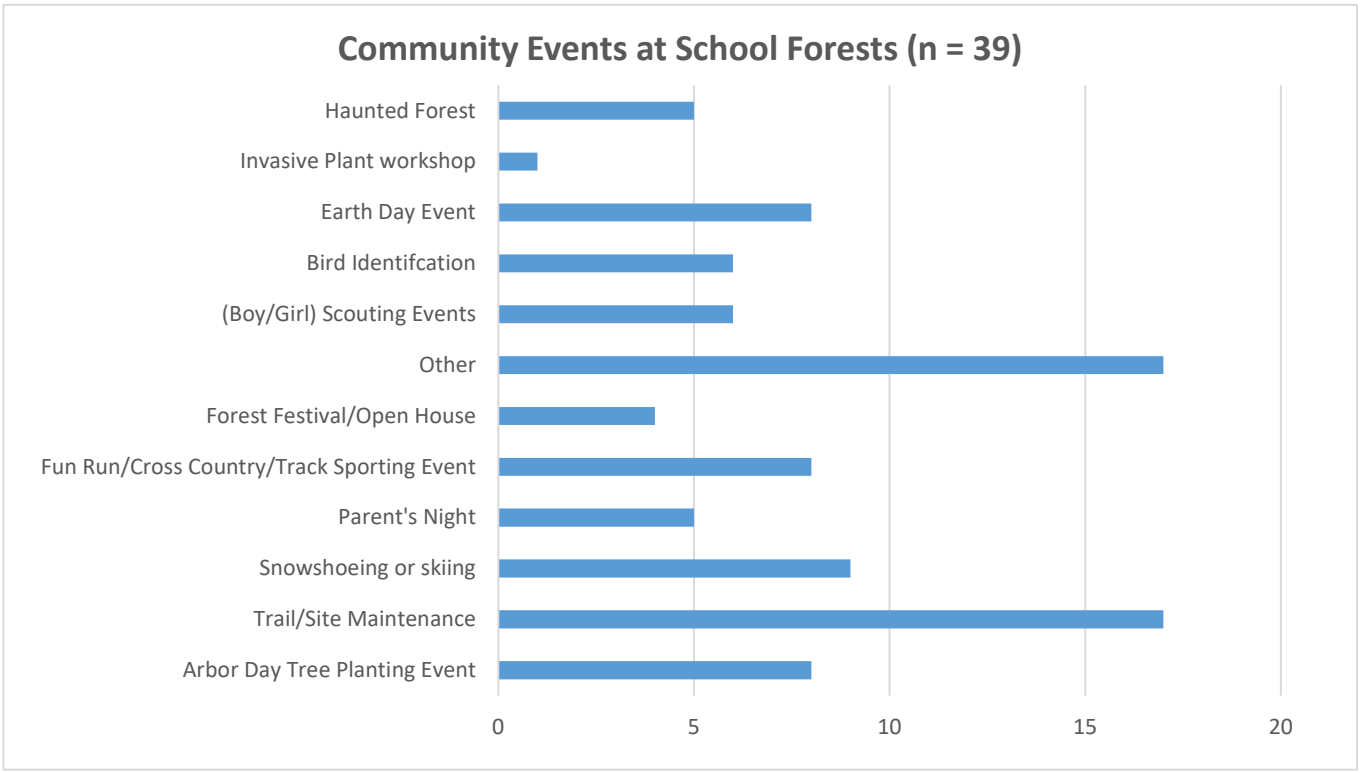
Community Use of the School Forest

- **Community members** used 39 (63%) of the school forests in the school districts that responded (n=62).
- **Collectively**, 9,602 community members utilized the 39 school forests that responded "Yes" to the question.
- The number of community members that used the school forests **ranged** from 2 to 3,500 people.
- **Utilization of the school forest** was highest from the general public, including recreationalists excluding hunters, since that was its own category. The districts indicated boy scouts, girl scouts, church youth groups, hunters, school clubs, local organizations, parent volunteers, government agencies, and school athletic teams also used the school forest.





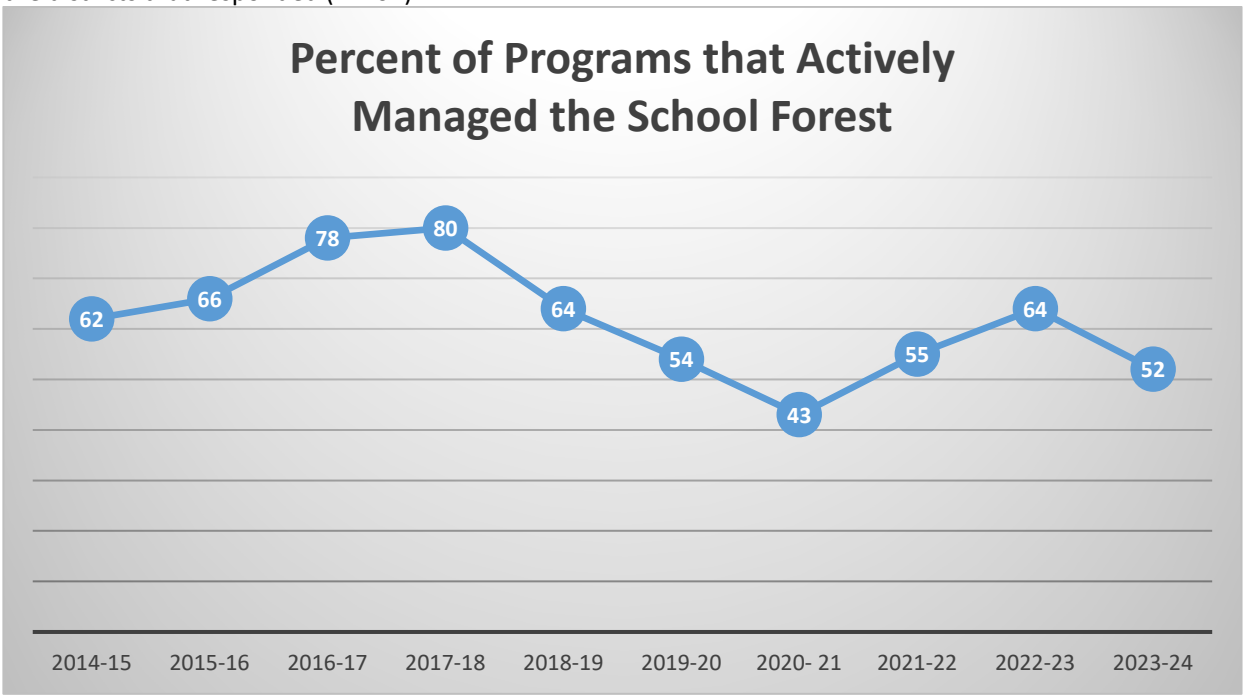
- **Community events** were hosted or provided by 35 (or 56%) of the 62 school forests that responded. The type of community event is seen in the chart below. Other examples of various special topic events reported: art show, family night hike, family adventure course, festivals & open houses, story walks, astronomy night, harvest events, community rental (weddings, showers, corporate), and Halloween events.



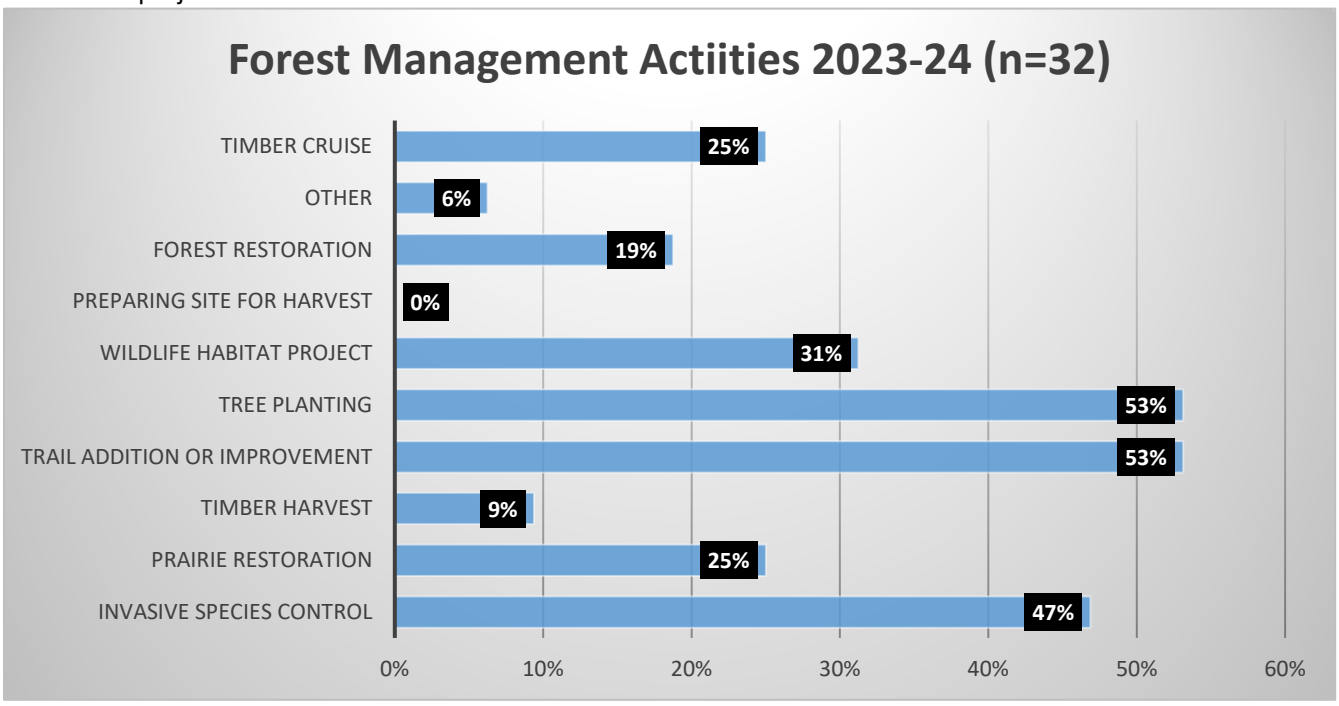
- Community members or local community organizations were **involved in helping manage** the forest's natural resources at 16 school forest events among the 39 forests in which community events were held. This included invasive species control, trail/site maintenance, and tree planting.

Forest Management

- **Sustainable forest management activities, lessons, events, or programs** have occurred on 32 school forests or 52% of the districts that responded (n = 62)

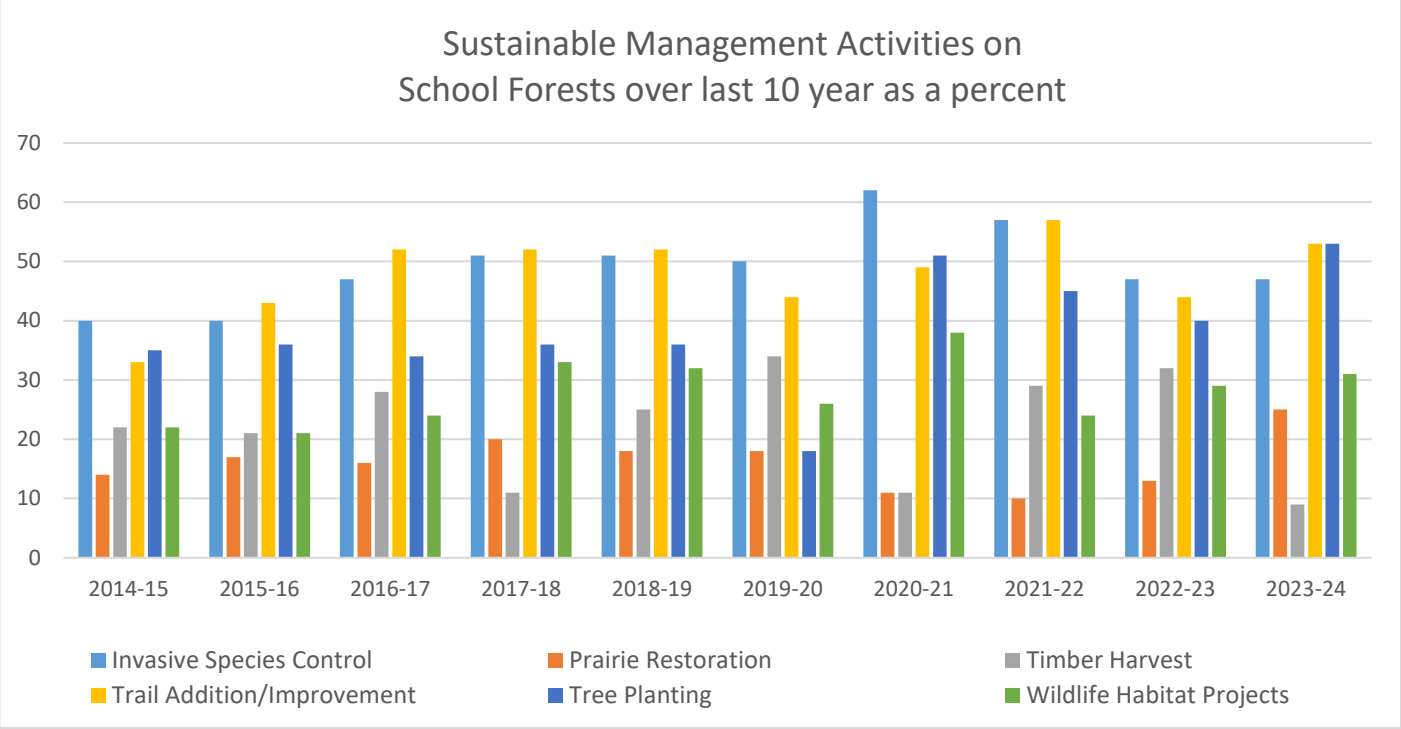


- Thirty—two survey participants responded to **the type of sustainable forest management** that occurred on their school forest. Tree planting and trail additions or improvements were the most common management activities cited in just over half of the forests that carried out sustainable forest management. Invasive species control was also common at 47%. Other management included forest restoration, timber harvest, prairie restoration, and wildlife habitat projects.



- Fifty percent of the total survey respondents indicated the **next management activity** would take place within the next year, none indicated 1-5 years, and 3% indicated more than 5 years. Five % of the respondents indicated a management activity but did not list a date for it to be completed.

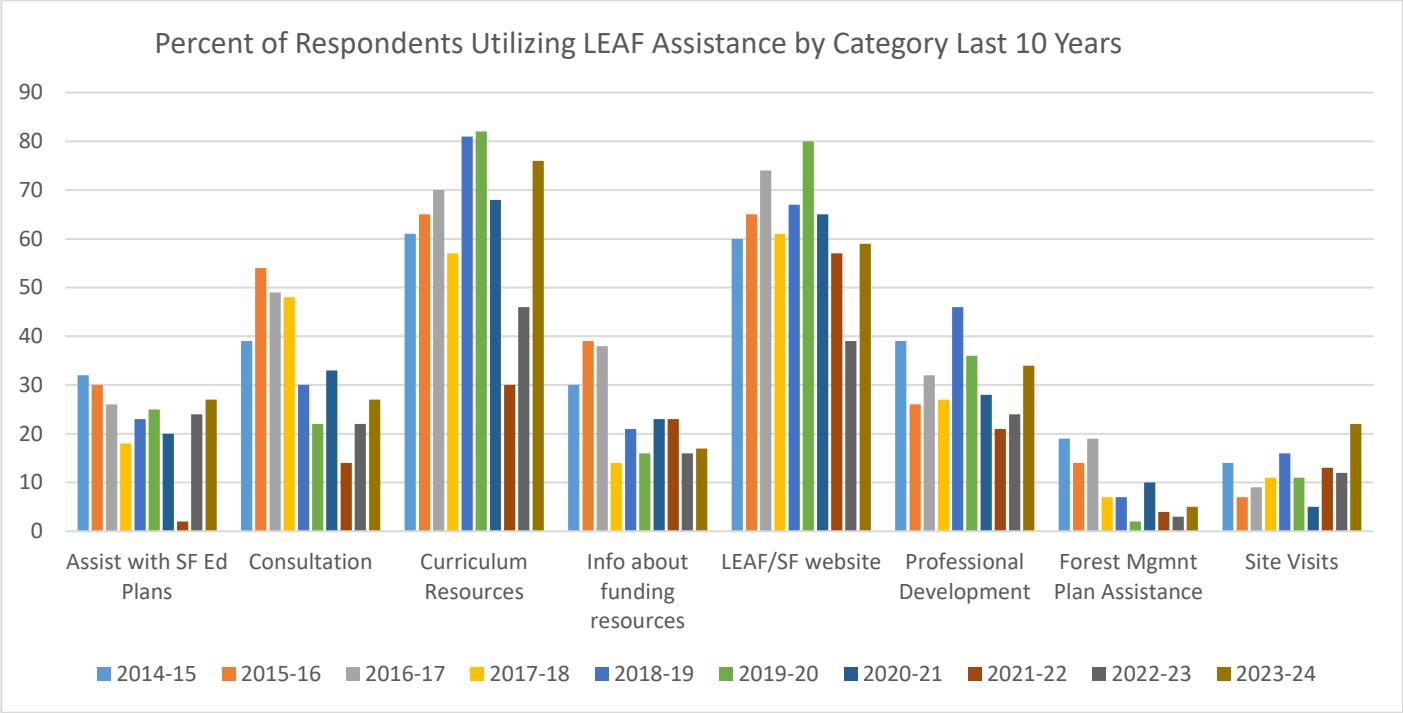
Comparative data for the past 10 years show that the most common management activities implemented at school forests are invasive species control and trail additions or improvements. Harvesting timber or preparing for a future harvest is a critical part of sustainable management at school forests and occurred at approximately 20% of the responding forests each year. However, that dropped to only 10% this year after being closer to 30% in three of the four years prior to 2023-24. This drop could be due to the large amount of timber harvest needed relative to the demand by mills. School Forest land tends to be lower on the list of priorities since many are smaller. Tree planting has also been higher than the ten-year average the past four years.

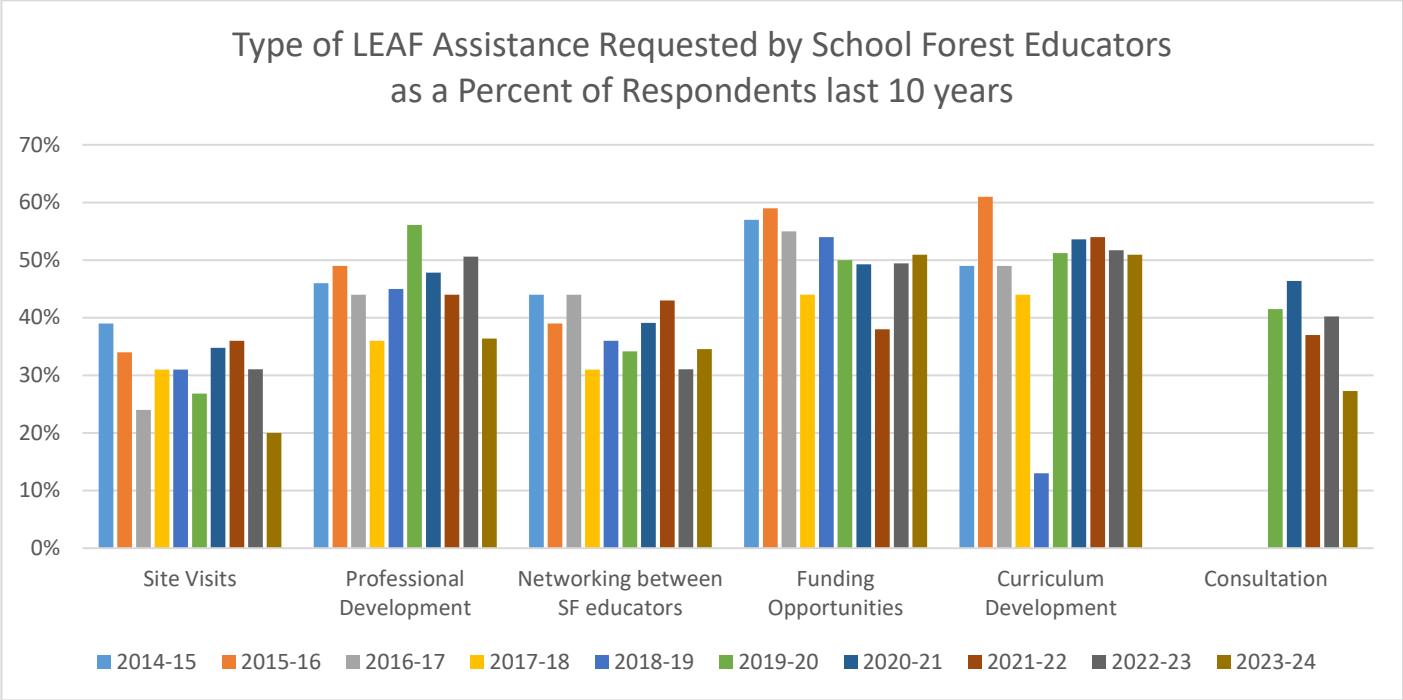


LEAF and School Forest Assistance

- The LEAF School Forest Program provided assistance to 67% of the school districts that responded to the 2023-24 school forest survey.
- To the school districts LEAF provided assistance, it was provided in the following areas: 76% received help with curriculum resources, 59% consulted the LEAF/School Forest website, 34% received professional development, 27% received consultation services, 27% received assistance with school forest education plans, 17% were provided information about funding resources, 5% received assistance with forest management plans, and LEAF visited 12% of the school forest sites.
- Eighty-nine percent of respondents identified **further assistance** is needed with the following distributions: 27% - consultation with the School Forest Education Specialist, 51% to develop curriculum resources, 51% to find funding opportunities for school forests, 36% would like professional development opportunities for staff, 35% asked for networking between school forest educators, and 20% requested school forest site visits.

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.





School Forest Personnel:

School Forest Committees:

- Found in 39% of the responding districts while 61% of the respondents did not have a committee

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

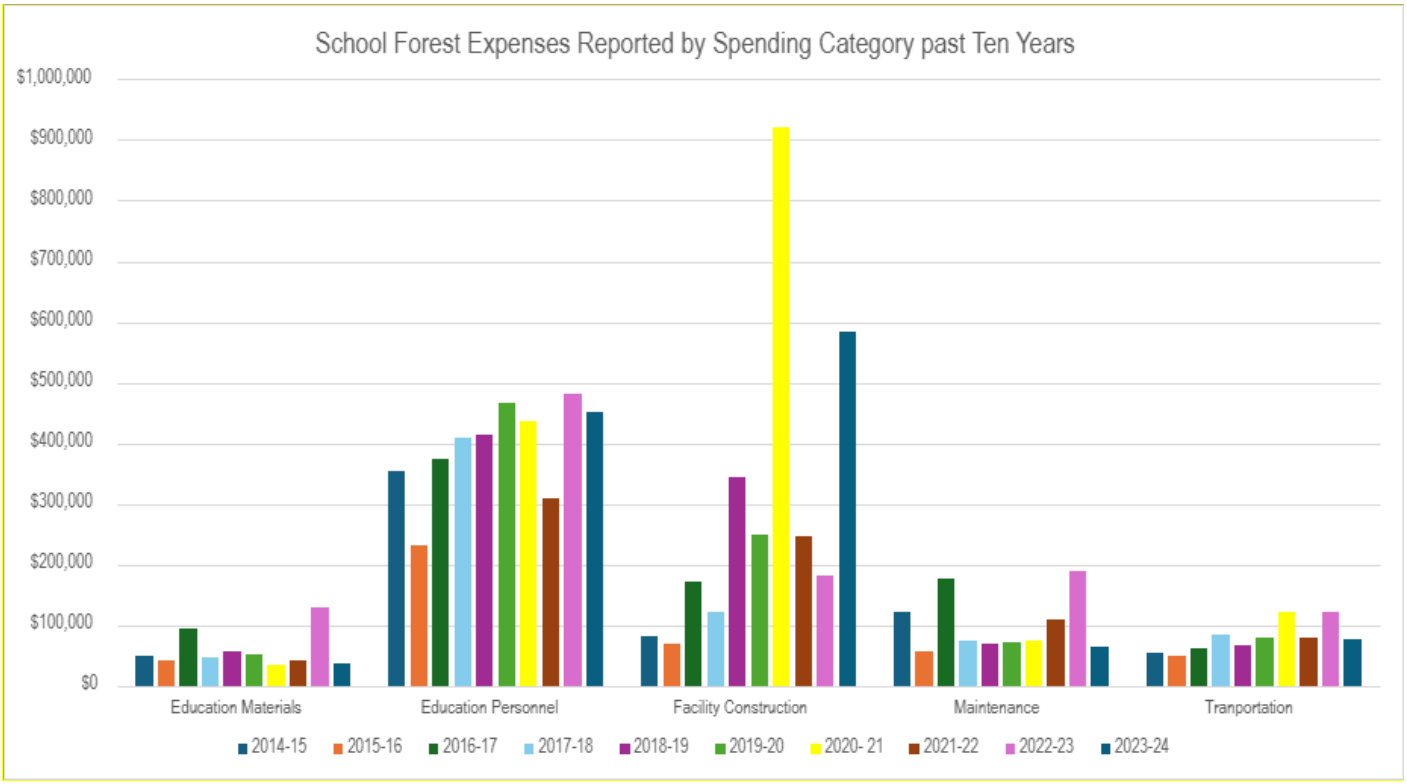
- Fifty-eight percent of respondents have a school forest coordinator while 42% do not (n=62)
- Forty percent of respondents replied that their school forest coordinator volunteers; 18% are paid part-time employees while 10% are paid for full-time work.

School Forest Budgets

2023-24 School Forest Expenditures

The following school forest expenditures were reported on the survey:

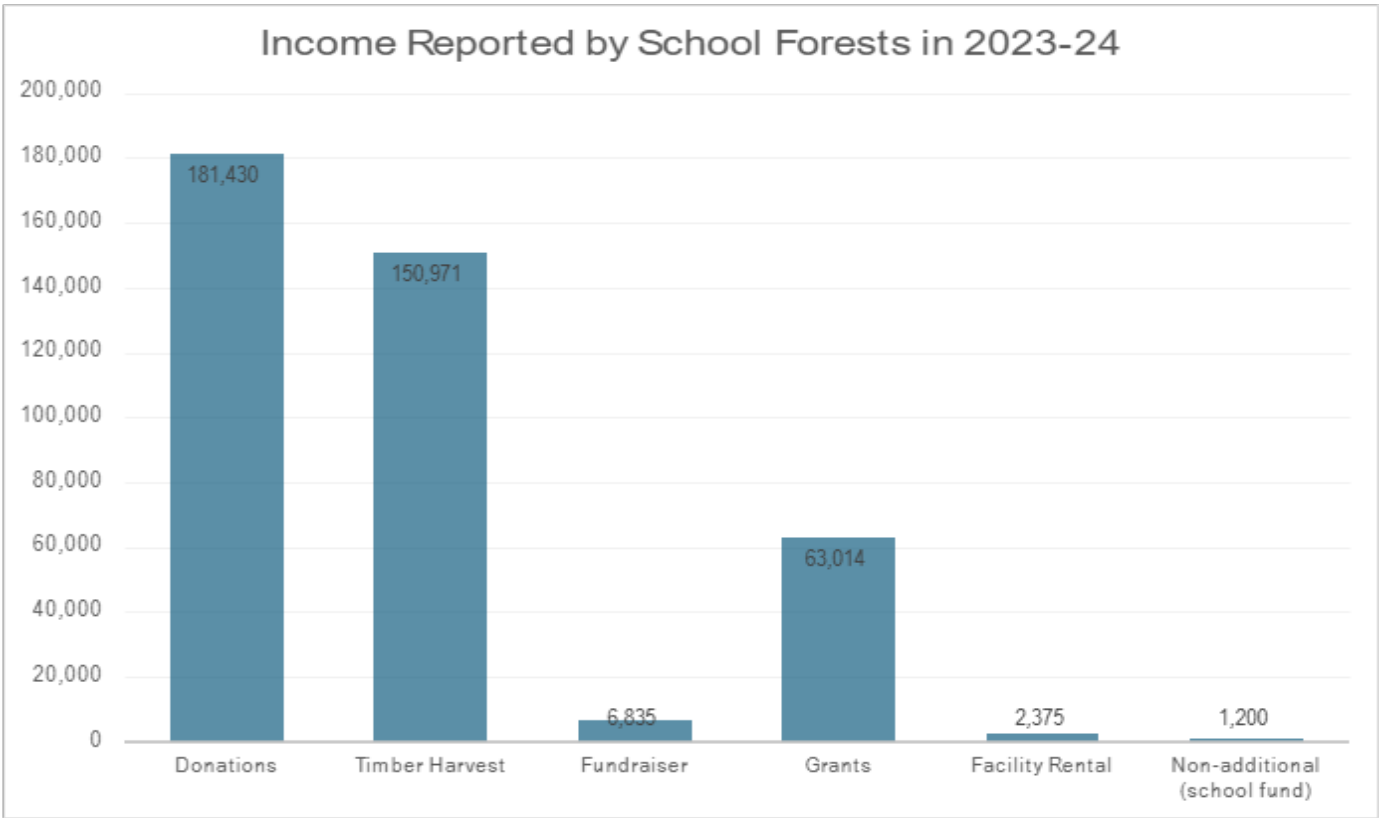
- School districts spent a total of $37,418 on **education materials** for their school forest programs. This calculates to an average of $613 per school district that responded. The maximum reported was $60,000. Sixty-six percent of school districts reported that no money ($0) was spent on school forest education materials.
- School districts spent a total of $481,250 on **education personnel** for their school forest programs. This calculates to an average of $7,407 per school district that responded. The maximum reported was $165,000. Seventy-four percent of school districts reported that no money ($0) was spent on school forest education personnel.
- School districts spent a total of $582,800 on **facility construction** for their school forest programs. This calculates to an average of $9,554 per school district that responded. The maximum reported was $110,000. Eighty percent of school districts reported that no money ($0) was spent on school forest facility construction.
- School districts spent a total of $64,508 on **maintenance** for their school forest programs. This calculates to an average of $1,058 per school district that responded. The maximum reported was $30,000. Fifty-two percent of school districts reported that no money ($0) was spent on school forest maintenance.
- School districts spent a total of $77,469 on **transportation** for their school forest programs. This calculates to an average of $1,270 per school district that responded. School districts indicated a range of $0 to $27,000 was spent on transportation to and from the school forest. Sixty-two percent of school districts reported that no money ($0) was spent on school forest transportation.
- Thirty-four percent of school forests reported no spending in these five categories in the 2023-24 school year.

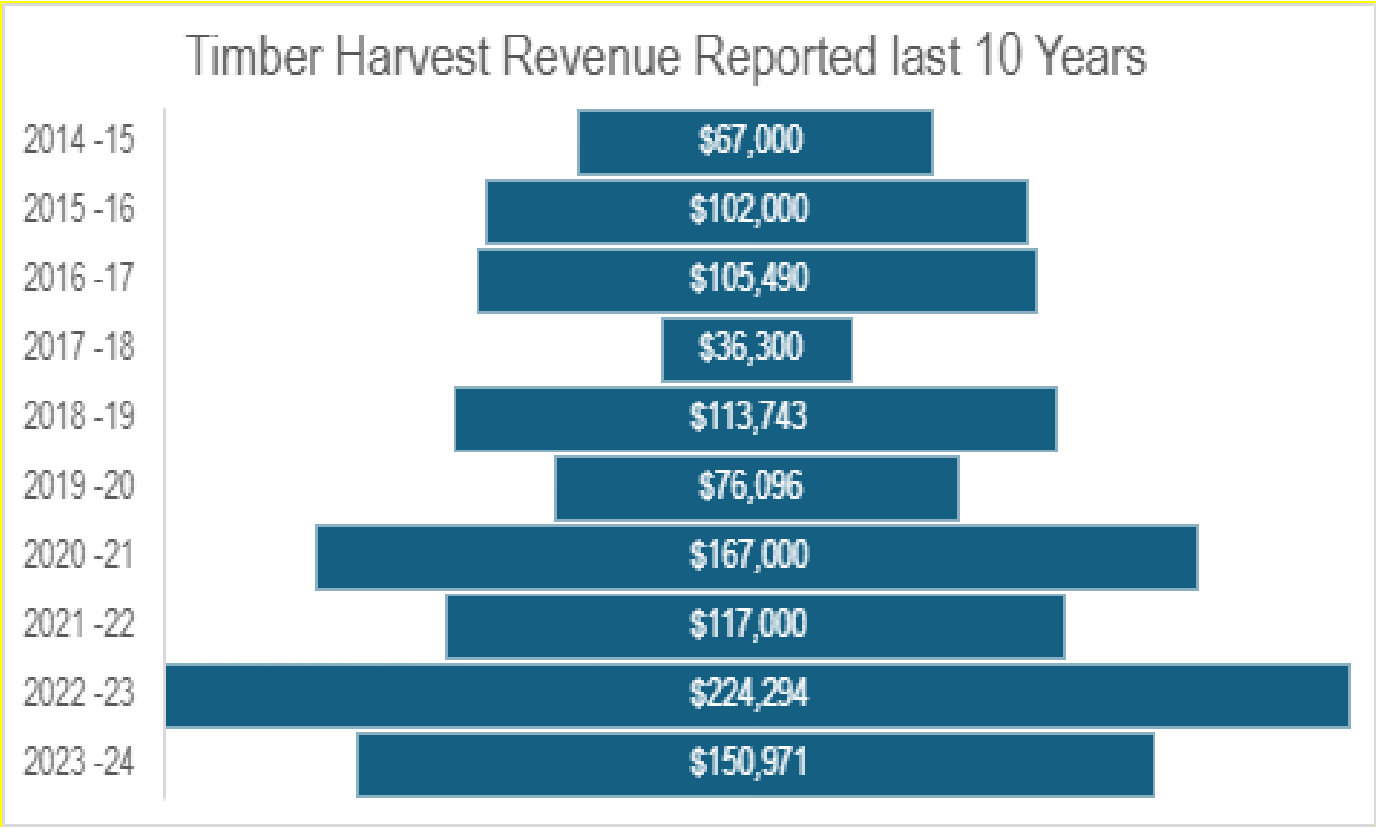


2023-24 School Forest Income

Thirty-eight percent of the school districts in the survey reported their school forest had generated income in the 2023-24 school year. A **combined total of $405,826 was generated** from school forest land or programming. Income from the school forest was generated from the following categories: timber sales occurred at 7% of those forests and generated a minimum of $150,971; 10% of the school districts generated money for their school forests through fundraisers and raised

a total of $6,835 , 16% of the districts generated $181,430 through donations, 2% of the districts raised money through facility rental recovering $2,375, and 13% of the these districts reported gaining $63,014 through grants.

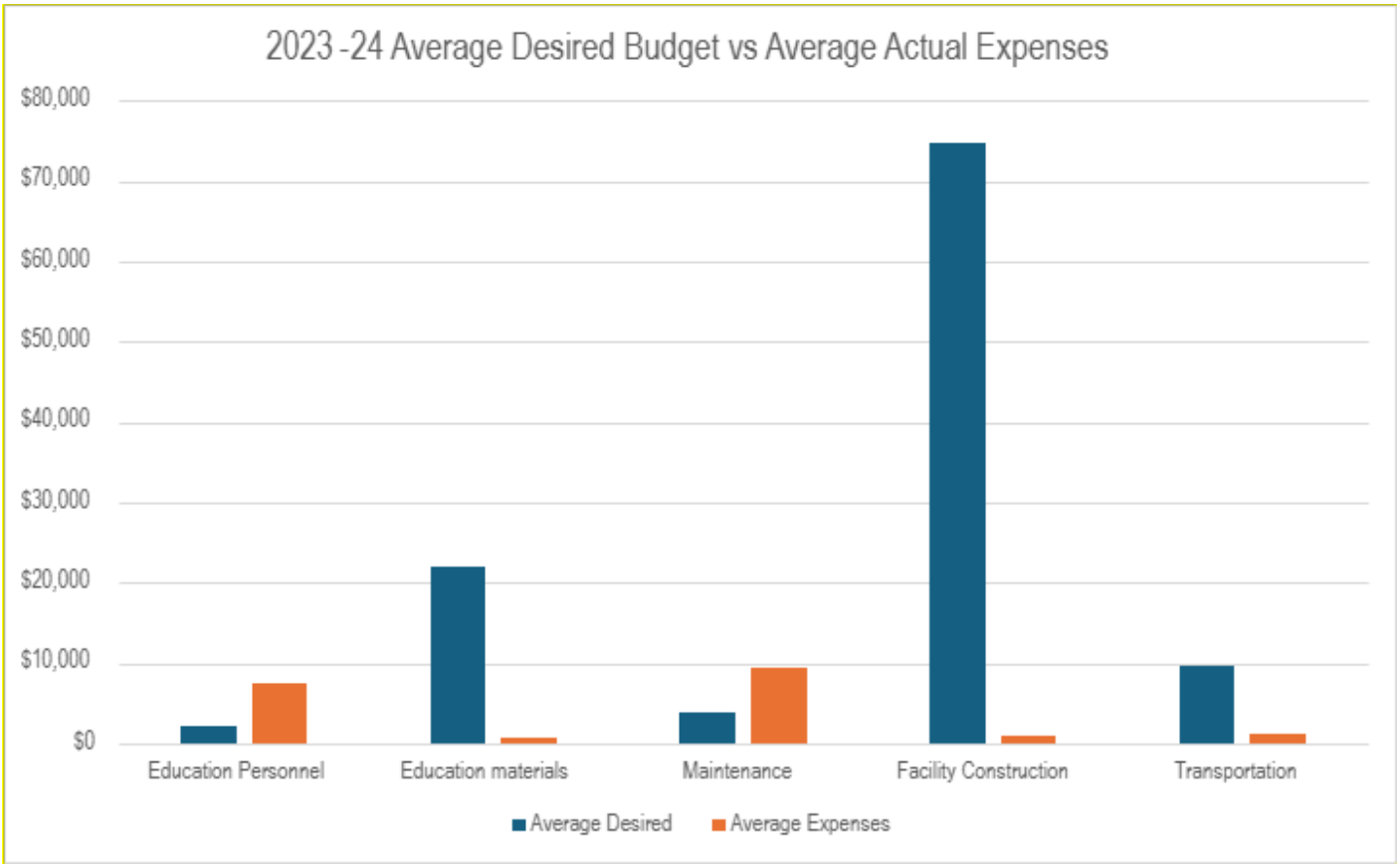




Desired Annual School Forest Budgets

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 $11,000 to spend on **education materials** for their school forest programs. The grand total desired for school forest education materials from all of the districts that responded is $. This calculates to an average of $2,064 per school district that responded.
- School districts would like a range of $0 to $300,000 to spend on **education personnel** for their school forest programs. The grand total desired for school forest education personnel from all of the districts that responded is $860,400. This calculates to an average of $22,062 per school district that responded.
- School districts would like a range of $0 to $1,500,000 to spend on **facility construction** for their school forest programs. The grand total desired for school forest facility construction from all of the districts that responded is $2,917,500. This calculates to an average of $74,808 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 of the districts that responded is $147,150. This calculates to an average of $3,773 per school district that responded.
- School districts would like a range of $0 to $300,000 to spend on **transportation** to and from their school forest programs. The grand total desired for school forest transportation from all of the districts that responded is $376,800. This calculates to an average of $9,662 per school district that responded.



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LEAF Program: May 2025

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