

BECOMING OUTDOORS SMART IN SUMMER



BOSS Annual Newsletter — 2017

www.MiWildlife.org

A Michigan Wildlife Conservancy Publication

Providing children with...

BOSS ON THE MOVE

... a unique opportunity!

The Michigan Wildlife Conservancy's Becoming Outdoors Smart In Summer (BOSS) Guidebook reached nearly 2,000 new families this year and expanded into new parts of the state. The unique education effort was first tested in 2014 to address a state and national problem—too many children are growing up without a basic understanding of nature and conservation practices. Now, just four years later, BOSS has proven that the family can be a vital component in environmental education. BOSS has evolved and expanded, and thanks to its partners and sponsors, is poised to help foster the next generation of conservationists.

BOSS uses a self-study guidebook to help kids develop outdoor observation and monitoring skills together with family members and friends. There are ten education units that teach skills like animal tracking, how to identify trees, birds, amphibians and reptiles, and analyze habitat for Monarch butterflies, fish (in streams), and pollinators important to agriculture and wild plants. It also helps children understand and appreciate the diversity of both natural landscapes and agriculture in



Michigan.

In 2014, BOSS was offered only as a pilot project for just a couple of dozen families in three counties of southern Michigan. The program was tested in 12 areas the following year, and in 2016, the Conservancy offered BOSS on a more statewide basis. It continues to grow, drawing favorable reviews from participants and parents, and augmenting the education efforts of other organizations.

What sets BOSS apart from other nature-oriented education efforts is its emphasis on families working together at their own paces. BOSS has no

requirements to travel to a specific site or follow a fixed schedule. Families can study nature one step at a time in areas around their homes or while on vacation without following an “expert.”

In 2017, BOSS Guidebooks were provided to children and their families in a wide variety of ways, including distributions through the Michigan Arbor Day Alliance, the Eaton County Science Adventure Camp, the Mount Pleasant-based Chippewa tribe, and other partners and sponsors. Some new ways were also developed to present BOSS' information to K-3rd graders. They will be reflected in the materials planned for 2018.

BOSS works because partners and sponsors, including Michigan Farm Bureau, the Michigan Foundation for Agriculture, Agriculture in the Classroom, Trout Unlimited, Michigan Association of Timbermen, and a host of local sponsors believe in the value of conservation and environmental education, and think the family is a vital component in education.

BOSS Education Units:

1. MICHIGAN TREES
2. WHAT BIRDS TELL US
3. FROGS, SNAKES, AND MORE
4. BECOME AN ANIMAL TRACKER
5. SOMETHING FISHY
6. MONARCHS ON THE MOVE
7. UNWANTED PLANTS
8. THE BUZZ ABOUT BEES
9. ATTRACTING WILDLIFE
10. LANDSCAPES AND AGRICULTURE

Parents Love BOSS!

- ◆ “I just want to let you know how wonderful I think this program is! The book is fantastic and my kids are motivated by it. Thanks so much—great work!!!!
- ◆ “My daughter is learning a lot....this is an awesome program....thanks for doing it.”

Any business, organization, or individual interested in becoming a BOSS partner, sponsor, or advocate should simply contact the Michigan Wildlife Conservancy at 517-641-7677 or wildlife@miwildlife.org. ADDITIONAL INFORMATION ABOUT BOSS CAN BE VIEWED ON THE MWC WEBSITE: MiWildlife.org



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Taking To The Trees... BOSS, Arbor Day Alliance Help Kids

On April 28, nearly 1,000 second and third graders celebrated trees and received the Michigan Wildlife Conservancy's Becoming Outdoors Smart In Summer (BOSS) Guidebook. The Michigan Arbor Day Alliance (MADA) hosted the annual State Arbor Day Celebration at Potter Park Zoo in Lansing. The official State Arbor Day Tree, a hickory, was planted and volunteers from various organizations and agencies spent the day teaching students about trees, invasive species control, water management, and wildlife. Thanks to a partnership between MADA and the Conservancy, each student received a 2017 BOSS Guidebook.

MADA encourages people to celebrate Arbor Day by planting a tree, volunteering at a local park or nature center, recycling, reading a nature-themed book to a classroom, or participating in a community beautification project or clean-up effort. Several Michigan com-



Conservancy intern Ambrie Garner teaches kids how to age a tree by counting rings in a cross-section of its trunk.

munities also hosted their own Arbor Day celebrations on April 28.

"We believe the Michigan Wildlife Conservancy's BOSS Guidebook is a perfect fit for our Arbor Day event," noted MADA Program Coordinator, Jennifer Hunnell. "BOSS helps families learn together about the outdoors and the guidebook includes a great education unit on Michigan trees. We are pleased that the Conservancy and their BOSS supporters are helping us make Arbor Day the start of a long-term education experience for the students." This year the students came from 44 classrooms of 22 schools in Jackson, Ionia, Eaton, Ingham, Clinton, and Shiawassee Counties.

The Conservancy's BOSS Guidebook has several education units that include information and activities that revolve around trees and modern forestry. Michigan Farm Bureau, Agriculture and the Michigan Association of Timbermen are among the sponsors of those education units.



Michigan Wildlife Conservancy

The Michigan Wildlife Conservancy (originally called Michigan Wildlife Habitat Foundation) was founded in 1982 by the late Mr. Russel Bengel, of Jackson, Michigan. Mr. Bengel was a former mayor of Jackson, CEO of multiple companies and a nationally known and respected conservationist.

The MWC, a non-profit 501 (c)(3) organization, has a long history in improving habitat for wildlife and fish throughout the state. Visit our website at www.miwildlife.org for highlights of this important work.

Contact the BOSS Program:

Dr. Patrick Rusz, Director of Wildlife Programs
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or E-mail: PRusz@MiWildlife.org

BOSS Advisory Committee Members:

- Kathy Bogar - active teacher
- Jan Derksen - retired teacher
- Douglas Holem - retired teacher
- Beth Moeller - active teacher
- Charles Hoover - retired historian
- Carol Johnson - retired teacher
- Torie Ray - active teacher



**THE MICHIGAN ASSOCIATION OF
T I M B E R M E N**

America's first Arbor Day was celebrated in Nebraska on April 10, 1872. J.

Sterling Morton, a pioneer

and journalist, championed the idea of a "tree planting holiday" in the Nebraska Territory. In 1885, the Michigan Legislature resolved "that the Governor is hereby requested to call the attention of the people of the state to the importance of planting trees for ornament and by naming a day upon which the work shall be given special attention to be known as Arbor Day." Each year, the Governor and Michigan Legislature proclaim the last week in April as Arbor Week, and the last Friday of that week as Arbor Day.



The Michigan Arbor Day Alliance is a coalition of organizations and agencies dedicated to the promotion and celebration of Arbor Day throughout Michigan. MADA is a program of the Eaton Conservation District based in Charlotte and is made possible through a partnership with the Michigan Department of Natural Resources.



Trout Unlimited Supports Education Effort



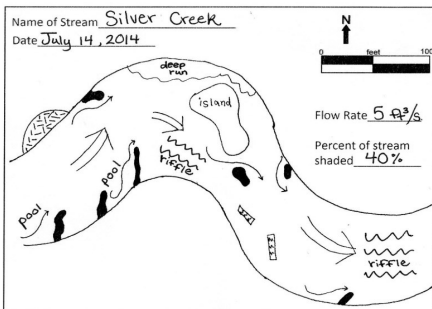
Two chapters of national organization dedicated to conserving, protecting, and restoring cold-water fisheries and their watersheds.

Trout Unlimited was founded in Michigan and has more than 150,000 members organized into about 400 chapters from Maine to Montana to Alaska. Michigan Trout Unlimited has 23 of those chapters.

are now supporting the Michigan Wildlife Conservancy's *Becoming Outdoors Smart*

In Summer (BOSS) Program. The William B. Mershon (Saginaw area) and the Leon P. Martuch (Midland area) chapters are sponsoring one of the BOSS Guidebook's ten education units. "Something Fishy: Analyzing Stream Habitat For Fish" teaches kids and their parents how to "read the water" of our state's rivers and streams, learning how channels change over time, and about the food chain that includes aquatic insects and other

BOSS participants learn to map sections of streams using examples like the one below.



Legend for Stream Map

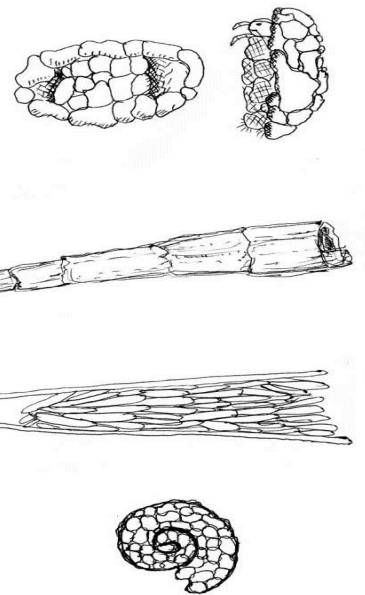
- Stream improvement structure or natural log jam
- Shoreline
- Submerged log(s)
- Current direction – width of arrow represents relative force of current
- Plant Bed
- Eroded bank



Above: Children "read the water" of a stream as they look for aquatic insects.



BOSS students learn to find and identify caddisfly nymphs in streams. These aquatic insects often live in self-made cases made of tiny stones or wood. You can tell you have different species inside if the cases look different.



COUPLE HELPS TROUT UNLIMITED, KIDS

While two chapters of Trout Unlimited stepped-up to support the Becoming Outdoors Smart In Summer (BOSS) program, a Dewitt area couple also boosted BOSS. Richard and Marilyn Augustine matched part of the donations of the William B.

Mershon (Saginaw area) and Martuch (Midland area) TU chapters.

Richard and Marilyn are long-time members of the Michigan Wildlife Conservancy. Richard has served in a variety of positions with the Lansing

area chapter of TU and is a member of the National Property Management Board of TU. The Augustines believe strongly in the value of conservation education and have supported several efforts to introduce kids to fishing.



LOCAL SPONSORS PUSH BOSS FORWARD...

A hallmark of Becoming Outdoors Smart in Summer (BOSS) is its use of a multi-level partnership/sponsorship program. That allows the Michigan Wildlife Conservancy to offer BOSS free or at low cost to participants. The Conservancy seeks “perfect-fit” partners and sponsors at both the state and local levels. State and regional sponsors are sought for education units, as well as the overall effort, and local sponsors can earmark donations for children in their communities and other areas of interest.

For example, BOSS participants in parts of Shiawassee, Saginaw, and Genesee Counties are supported by the Chesaning Area Conservation Club (CACC), the Chesaning Parks and Recreation Commission, and several local businesses and individuals. This kind of grass-roots support not only allows BOSS to expand, but sends a powerful message to children and their parents—that community leaders think conservation education is important.

“Our organization was established in 1945,” said CACC member, Jack Alden. “And today, it’s more apparent than ever that youth education is a key to conservation. We’re glad to help through BOSS.”

In the past two years, BOSS has also been boosted by community foundations, groups like the Saginaw Field & Stream Club and Wildlife Unlimited of Delta County, chapters of the International Lions Club, Meijer, Inc., and other local sponsors.

Organizations that have multiple chapters or clubs can assist the BOSS Program at several levels. For example, each chapter or club can provide earmarked donations of \$250 or more to support children participating in BOSS in their local areas. If other chapters make similar donations and the total reaches \$2,500 or more, the district, regional, or state parent organizations can be recognized as sponsors or partners at higher levels. The Conservancy recognizes BOSS partners and sponsors in a variety of ways—in the BOSS Guidebook, on its web-site, in newsletters, and press releases. Organizations can also use the program logo in conjunction with the MWC mark for their own purposes (e.g., membership drives).

For more information about assisting BOSS, contact John Ropp at 5170641-7677 or JRopp@MiWildlife.org.



Meijer Inc., through Store Director Dana Beattie, provided BOSS Guidebooks for 50 Lansing area kids.



... AND INFLUENCE ITS CONTENT

The partners and local sponsors of BOSS don't just support the education effort financially, they help shape it through their ideas. BOSS uses an advisory board of educators, and also listens to the suggestions of the families that use it, and to the program's supporters. The basic structure of BOSS remains similar to that first presented in 2014; however, new twists have been added each year. For example, in 2016 the Guidebook was modified to better serve children entering 4th-6th

grades, and more information on natural resources found in the northern part of the state was included. An education unit that families can work on while traveling in cars was also introduced.

This year, new distribution methods were developed, and work continued on adding some Native American language and other cultural information. A “Junior Version” of the Guidebook

for K-3rd graders is nearing completion and other new materials are in the works. The Michigan Wildlife Conservancy will continue to seek ideas to make BOSS even more useful to families in our state, and partners and local sponsors will play an important part in shaping BOSS in the future.



BOSS Photos – A Kid's Eye View of Michigan Nature

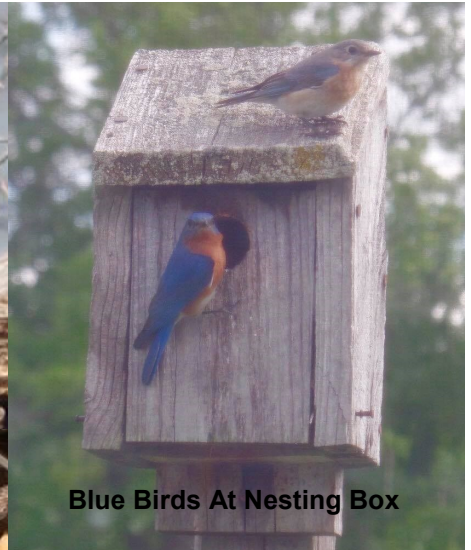
Participants in Becoming Outdoors Smart In Summer aren't required to turn in any work, but a private Facebook Page is provided so families can share their findings. Here's a few of the great photos they posted in 2017.



Cedar Wax-wing



Midland Painted Turtle



Blue Birds At Nesting Box



Crayfish "Chimney" At Burrow



Garter Snake



Tree Frog



Caterpillars



Red-backed Salamander



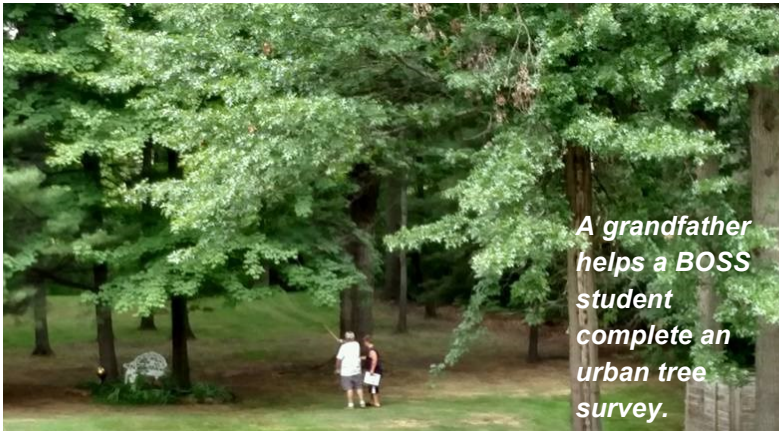
Analyzing Forest Cover Types



Woodpecker Activity

Using The BOSS Guidebook... The Nuts and Bolts.

You become “outdoors smart” by developing observation skills—learning how to “read” the landscape like some people read books. For the children and their families that participate in Becoming Outdoors Smart In Summer (BOSS), the first step is gaining skills in identifying animals, plants and other parts of nature. They do this while becoming aware of conservation issues through a variety of outdoor activities.



A grandfather helps a BOSS student complete an urban tree survey.

some families, and schools can use BOSS activities to introduce STEM (Science, Technology, Engineering, and Math) concepts. Individual teachers can choose to use it in a variety of ways to teach whole classes about nature and conservation issues.

During the past two years, BOSS was used to teach multiple classes at the Eaton County Science Adventure Camp and at other events where schools participated. So, it is not just for use by

Each of BOSS' 10 education units has an introductory (background) section followed by suggested activities that can be modified for different age groups. For example, the popular unit—Michigan Trees: Tree Surveys in Modern Forestry—describes how trees are identified, examined, and evaluated by foresters and others, provides color photos of 30 common Michigan trees, and then challenges the BOSS participants to complete both an Urban Tree Survey (along a sidewalk at least 300 feet long) and a Woods Survey (one acre). The kids take a variety of measurements, and importantly, take close looks at both individual trees and groups (associations). Parents of BOSS participants often mention that they did not realize that there are different tree species in the layers (understory and overstory) of a forest. That kind of discovery leads to a lot of “Why?” questions and maybe a little research and a better understanding of Michigan's forests.

There is no work to turn in, but BOSS encourages children to document their findings. Many kids especially enjoy photographing or sketching animal signs, plants, and amphibians and reptiles. (See page 5 of this BOSS Annual Newsletter.) They make plaster casts of tracks, and learn the tricks necessary to get good photos of small, quick-moving birds and insects. In the Unit on Monitoring Amphibians and Reptiles, the BOSS Guidebook suggests doing some snooping around at night with a flashlight or a small headlamp. Some families have done just that and reported having a great and interesting time.

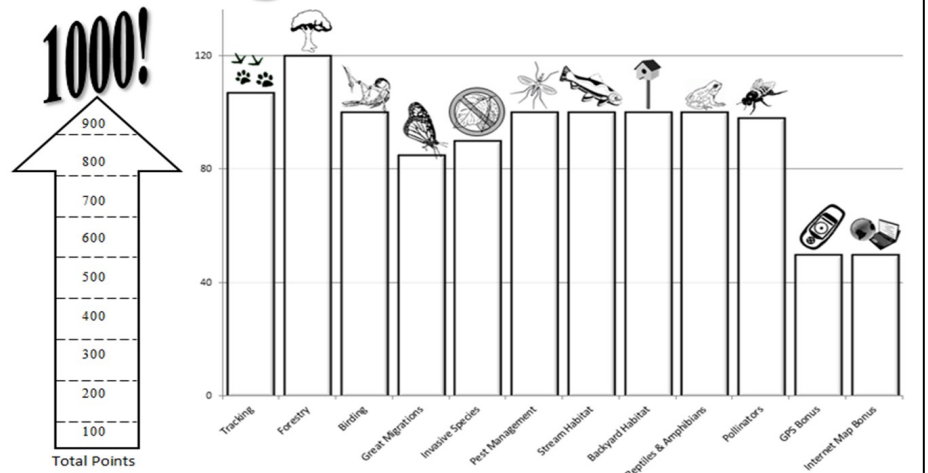
BOSS also suggests, but does not require, keeping a journal or scrapbook. A few schools that utilize BOSS do require journals, but the Guidebook reminds kids and parents that it is more important to be outdoors observing than cutting, pasting, and taping indoors.

Some BOSS families incorporate a little technology into their outdoor activities. Parents that use

remote trail cameras or Global Positioning Systems can introduce their children, especially 4th-6th graders, to the instruments and how they can be used in detecting animals active at night or mapping habitats.

families. BOSS was not developed to replace or compete with the various outdoor education programs that use trained presenters, but rather to allow children to get more out of all of their time spent exploring nature.

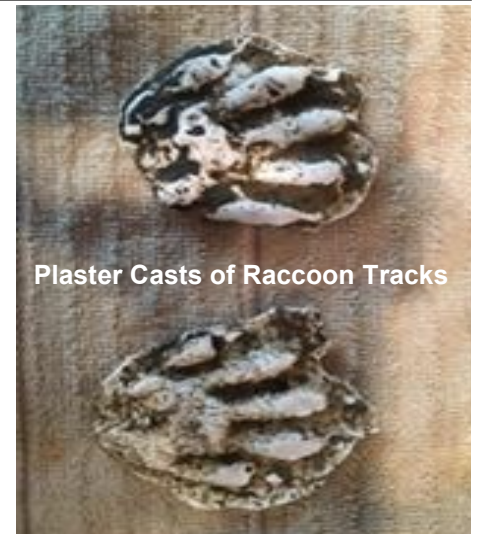
Charting Your BOSS Points



Kids can accumulate points for time spent in certain activities, and demonstrations of skills. BOSS is based on self-evaluation; that is, the participant (student) and a family member (or two) decide how many points he or she has earned for an activity. Participants can enter their points on a certificate (provided in the Guidebook) suitable for framing, but the earning and recording of points is simply a way to track progress. About half of 4th-6th grade BOSS participants that track their points score 500 to 800 (out of a possible 1,000) in their first summer; less than 10 percent score 800 or more. Of course, the important goal is to have fun and learn about nature. Since BOSS can be a multi-year effort, point totals can grow from year-to-year.

BOSS is used

year-round by



Plaster Casts of Raccoon Tracks



Scouting for Wildlife... with BOSS

In St. Johns, Michigan, Cub Scout Packs 516 and 396 are on their way to earning the unique "World Conservation Award." Boy Scouts of America developed the award program to provide an opportunity for individual Wolf Scouts, Bear Scouts, and Webelos to "think globally" and "act locally" to preserve and improve our environment. Through the use of the Scout Guide and the Becoming Outdoors Smart In Summer (BOSS) Guidebook, these St. Johns area second to fifth graders learned this summer and fall how to protect our natural resources in fun, family, and Den ways.

The BOSS Guidebook augmented perfectly the adventures that these Scouts had to experience. For instance, the Wolves (2nd graders) had to complete the Spirit of the Water adventure. One of the requirements was to learn about water pollution. The BOSS Guidebook's education unit "Something Fishy: Analyzing Stream Habitat For Fish," sponsored by Trout Unlimited, took this lesson further by helping them learn that not only can pollution come in chemical forms, but our natural waterways can also be severely damaged by erosion, invasive plants, and other factors.

The Bears (3rd graders) had adventures like "A Bear Goes Fishing" that were centered on wildlife. This requires them to learn about different types of animals and their habitats. The BOSS Guidebook provided detailed, yet understandable, information and pictures that these scouts were able to use to help them identify different aquatic/wetland species. On one field trip,



Cub Scout "Wolves" learned about water pollution and exotic plants with the help of the BOSS Guidebook



Boy Scout "Webelos" used the BOSS Guidebook to identify trees and other plants.

*Text and photos by Margot Dove,
Cub Scout Pack 516
Committee Chairperson*

these Bears were able to "save" two young snapping turtles from traffic in an industrial parking lot and release them into a nearby suitable habitat.

The 4th and 5th grade Webelos' requirements focus more on habitat. One adventure is called "Into The Woods." They have to identify different trees and other plants and determine whether they are native to the area. The BOSS Guidebook, which has education units on Michigan Trees, and Unwanted Plants: Understanding the Problem Of Invasive Exotic Species, had beautiful pictures that the scouts could use to identify both the native trees and exotic invasive plants.

Boy Scouts of America develops its programs very well so that the adult leader can easily guide the youth through the learning adventures. Having the opportunity to utilize the BOSS guidebook at the same time not only simplified the process but enhanced it for the youth. They were excited to be able to compare the information that they read about with pictures that showed the "real thing." The guidebooks of the Scouts and BOSS worked extremely well with each other and provided an excellent learning opportunity. Cub Scout Packs 516 and 396 are very grateful to the Michigan Wildlife Conservancy, its BOSS Program partners and sponsors, and Dr. Patrick Ruzs for allowing us to use BOSS to enrich the Scouts' conservation-minded learning experience.

AGRICULTURE AND CONSERVATION... ON THE SAME PAGE

The leaders of agricultural interests and nature conservation are sometimes on "different sides of the fence." But they find common ground in supporting the Becoming Outdoors Smart In Summer program. While concern has been growing that young people are spending too little time outdoors and missing out on the benefits of nature studies, a similar problem is worsening with respect to agriculture. The Michigan Foundation for Agriculture, a sponsor of a BOSS unit—the "Big Picture: Michigan Landscapes and Agriculture"—notes that two-thirds of Michigan's citizens have not been on a farm in the last seven years. Most can readily identify only a few kinds of crops as they travel through our state's farmland and are largely unaware of why certain crops grow best in different areas of Michigan.



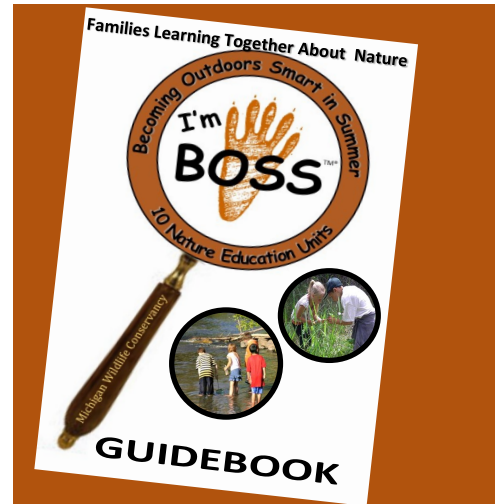
A filter strip of dense grasses and other vegetation to keep water from running directly into ditches or streams. The strips "filter out" soil (sediment) and nutrients like phosphorous that can cause algae and other unwanted plants to grow in streams and lakes.

BOSS encourages families to learn about forestry in Michigan, how farmers match plants with the opportunities that different locations provide, and with the land and water management options that can influence the environment. Being able to identify different crop fields helps a person understand how Michigan's agriculture fits into the landscape, and how it affects wildlife. BOSS helps kids and their parents learn about practices, like the use of special cover crops and filter strips, that can protect natural resources. The BOSS Education Units—"The Buzz About Bees: The Importance of Pollinators to Agriculture and Wild Plants", and "Unwanted Plants: Understanding the Problem of Invasive Exotic Species"—also deal with topics that are extremely important to the next generations of both farmers and conservationists.



Quick Facts About *BOSS*

- ⇒ **Age Groups Targeted:** K-3rd and 4th-6th grade versions of the BOSS Guidebook.
- ⇒ **Cost:** Free, subject to availability of local sponsorships.
- ⇒ **Schedule:** None
- ⇒ **Time Required:** It's up to you! Approximately 30-40 hours spread over the whole summer, or less if you decide not to complete all the education units.
- ⇒ **Teachers:** Yourself, your parents or grandparents, and your friends .
- ⇒ **What You'll Learn:** Animal tracking, identification of birds, trees and other plants, solutions to conservation problems, and much, much more.



A 36-year-old organization dedicated to our state's fish and wildlife resources.

Michigan Wildlife Conservancy's *Becoming Outdoors Smart in Summer...* The *BOSS* Program—is off and running!

BOSS is supported by "perfect fit" partners and sponsors like Michigan Farm Bureau, the Saginaw Field and Stream Club, the Michigan Association of Timbermen, Trout Unlimited and a host of community organizations. If you believe in the value of conservation and environmental education, and think that family is a vital component in education – YOU ARE A PERFECT FIT FOR BOSS!



The future of BOSS depends on a steadily-expanding network of participants, partners, and sponsors. Please HELP US KEEP BOSS MOVING FULL SPEED AHEAD.

If you would like to explore how your company/organization may become a *BOSS Partner*, please contact John Ropp to discuss a host of options at all levels: JRopp@MiWildlife.org – or – 517-641-7677.

Families Learning About the Outdoors Together

