



Greetings!

Thank you for choosing the McHenry County Conservation District's Forest Frolic field trip at Rush Creek Conservation Area. This is an all day field trip, including a picnic lunch as we hike. Students learn how forest plants and animals are interdependent and find out why forests are important to humans. Students take part in the story of "The Lorax", participate in a forest restoration project, and learn the parts of the tree and the basics of photosynthesis.

Please make sure all teachers and chaperones attending the field trip are aware of the following information.

1. Teachers, chaperones and students should dress for the weather and wear sturdy footwear for hiking as we are outside the entire time.
2. One adult chaperone for every 10 students is required to ensure the safety of the students. We expect chaperones to monitor student behavior and participate in the field trip as well.
3. All students should wear a nametag.
4. Encourage everyone to bring plenty of water and a waste-free lunch! Pack lunches in insulated containers and include items that can be eaten in their entirety, recycled or composted. Examples are whole fruits and vegetables, drinks in reusable bottles, snacks purchased in bulk and brought in a reusable container, cloth napkins, and reusable ice packs. Everyone is encouraged to bring a backpack or fanny pack to carry lunches and drinks as we break for a picnic lunch along the trail. For additional information on reducing waste visit www.epa.gov/epawaste/wycd/index.htm.
5. Background information as well as pre and post-trip activities are available for this and all McHenry County Conservation District school field trips in your choice of format. Completion of the activities ensures a more successful learning experience for your students. This Forest Frolic packet also contains a map to Rush Creek Conservation Area.
 - Download information from our website at www.mccdistrct.org; click on the Education tab.
 - Request that information be sent to your email or school address (call Leslie Krebs at 815-479-5779.)
6. In the event of inclement weather on the day of your field trip, contact Leslie Krebs at 815-479-5779 to discuss rescheduling options.

I look forward to seeing you!

Sincerely,

Leslie Krebs
Education Program Coordinator

Forest Frolic at Rush Creek Pre- and Post-trip Activities

Pre-trip:

1. “Vocabulary”-Go over the vocabulary words on the next page with the students.
2. “Disappearing Forests”- Ever wonder what McHenry County looked like prior to settlement? In this activity the students will compare the land cover of pre-settlement McHenry County to what it looks like today. It will involve some coloring and a little math to get the whole picture.
3. Complete “From Paper to Plastic” with your students. During this activity, students explore all of the things that they use everyday that come from trees. More than likely, they will be surprised! This activity is from Ranger Rick’s *Naturescope* series.

Post-trip:

1. “Fill in the Blank”-We covered quite a bit of material during the field trip. You can use this activity to test the student’s knowledge about their experience.
2. “The Lorax”- We read this Dr. Seuss classic as part of the field trip. Some of the questions may have been covered during the field trip. The other questions may require a little more reflection and critical thinking on the part of the student.
3. Do the “Forest Life Web” worksheet. Each student will have made their web differently, but the message will be the same. “All things in the forest are connected and depend upon each other for survival”. Make sure that the students try thinking of indirect connections as well. (For example, the nuthatch needs soil because the trees it depends upon need soil to survive). To conclude this activity, discuss what happens when one element of a system is missing. What else is affected? Reinforce the idea that a forest system needs all of its elements in order to be considered healthy.
4. “Under Cover” reinforces the field trip concept that there are many things in the forest that aren’t readily visible.

Pre-Visit Activities
Forest Frolic Field Trip Vocabulary

Simple leaf ~ a leaf made up of only one leaf blade

Compound leaf ~ a leaf made up of many leaflets

Lobes ~ large indentations or notches on a leaf

Photosynthesis ~ the process by which plants use the sun's energy to convert carbon dioxide and water into sugar

Heartwood ~ the older non-living central portion of a tree that gives the tree support

Phloem ~ the plant tissue that transports dissolved minerals from the leaves down to other portions of the tree.

Xylem ~ the plant tissue that transports water and minerals up the tree from the roots to the leaves and other parts of the tree.

Chlorophyll ~ the green plant color that absorbs sunlight needed for photosynthesis

Non-native species ~ plant or animal species that have been introduced and are not native to a particular area.

Food Web ~ an interlocking series of food chains

Food Chain ~ the transfer of food energy from plants to other organisms, each which feeds on the previous one to acquire energy

Disappearing Forests

The original vegetation of McHenry County was a mixture of forests, prairies and wetlands. As settlers moved into this area, the land was cleared and plowed for homes and farms. McHenry County today looks very different than it did in the early 1800's. Have the students color in the squares (each square represents 1%) and answer the following questions:

1) % Land cover prior to settlement: _____Forest _____Prairie _____Wetland

2) % Land cover in 1991: _____Forest less than 1% Prairie _____Wetland
 _____Agriculture _____Urban _____Other

3) What do you suppose happened to the forested areas of McHenry County?

4) What were the trees used for? _____

5) What do you suppose this map will look like in 25 years? _____

Pre-Settlement McHenry County

(% from Public Land Survey and Soil Surveys)

F	F	P	F	F	P	P	W	F	F
F	W	P	F	F	P	P	F	F	W
W	F	P	F	F	P	F	F	W	F
F	W	F	F	F	W	P	F	P	F
F	F	P	F	F	P	F	F	P	F
W	W	P	F	F	P	F	F	F	F
P	F	P	F	P	P	F	P	W	P
W	W	P	P	P	W	P	P	W	F
P	P	F	F	F	P	P	P	P	F
P	W	P	F	F	F	P	F	F	F

F = Forest (green)
 P = Prairie (yellow)
 W = Wetland (blue)

1999 McHenry County

(% from Illinois Department of Agriculture)

A	A	A	A	A	A	A	A	A	F
A	A	A	A	A	A	A	F	F	W
A	F	A	F	A	A	A	F	A	O
A	A	A	A	A	A	A	F	U	U
A	A	A	A	A	U	U	F	U	U
A	W	A	A	A	A	A	A	O	F
A	F	A	A	A	A	A	U	U	U
A	A	A	A	A	A	O	U	U	F
A	A	A	A	A	A	U	U	U	U
A	A	A	A	A	A	A	U	U	F

F = Forest (green)
 P = Prairie (yellow)
 W = Wetland (blue)
 A = Agriculture (brown)
 U = Urban (red)
 O = Other (white)

From Paper to Plastic

(from Nature Scope-"Trees are Terrific")

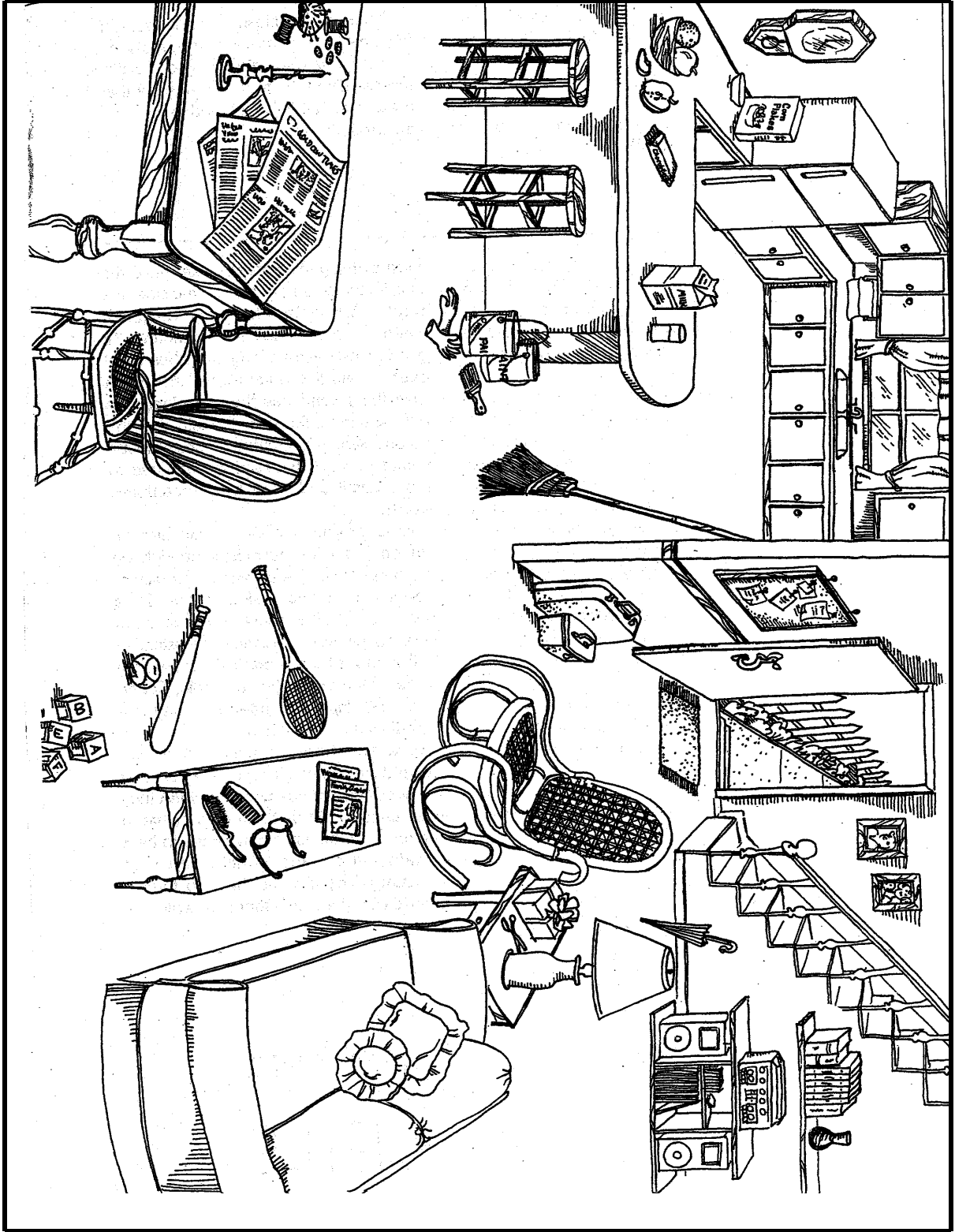
Copy the back of this page and hand it out to your students. Tell the kids that there are more than 40 things in the picture that are made, in some way, from trees. Then have them use a pencil to circle all of the tree objects they can find. Go over their answers using the information below.

Building with wood: People build a lot of things with wood. When logs are brought to the sawmill their bark is removed and they are carefully measured and cut into lumber. The lumber is used to construct houses, buildings, tool handles, furniture, crates, and toys. **Wood products in picture:** banister, baseball bat, blocks, bookshelf, broom handle, bulletin board, cabinets, chairs, clock, counter, door, fence, fruit bowl, molding on wall, paintbrush handle, picture frame, sofa, stairs, stereo, spools for thread, stools, tables, tennis racket, umbrella handle, window frame, wood inside walls.

Making Paper: Paper is made from cellulose, the major component of cell walls in most plants. To turn a tree into paper, the bark is stripped off and the trunk chopped into chips. Afterward the chips are cooked with chemicals until they form an oatmeal-like pulp. The pulp is washed, impurities filtered out, leaving a pulp of cellulose fibers and water. This clean pulp is sent through a series of machines where the fibers are flattened and broken apart, the water removed and finally compressed to make paper. **Paper products in the picture:** books, candy wrapper, cereal box, gift wrapping and box, magazines milk carton, newspaper, notes on bulletin board, paper towels, record album cover.

Cellulose: Besides being used to make paper, cellulose is also an ingredient in many other products. It can be mixed with chemicals, turned to liquid, and then squeezed through small holes to form fibers. It can also be added to certain substances. **Cellulose products in the picture:** buttons, comb, eyeglass frames, hairbrush handle, luggage, pillows, rug, and upholstery on sofa.

Other products: **Bark products-** baseball (cork center), bulletin board
Gum resin and rubber products- paint, rubber gloves
Food products- apples, chocolate bar, orange



Fill in the Blank

Complete the following sentences using the words found below.

While you were walking through the forest you found leaves from two different oak trees. After studying them carefully you determined that one of the leaves was a _____ oak because it had pointed lobes and the other was a _____ oak because of its rounded lobes. You also found a compound leaf with 5 leaflets. You knew this had to be from a _____ tree.

You continued on your walk and decided to take a short break next to a tree that had been recently cut down. You looked closely at the stump that was left and remembered that the _____, which is found at the very center of the tree, helps it to stand up. Water travels through the _____ on its way to the leaves. You then decided to do a little exploring under the leaves surrounding the stump and found pill bugs, centipedes and ants. Even though these creatures are very small they are an important part of the many _____ found in the forest.

After resting for several minutes, you continued your walk. Along the way you noticed a lot of _____, which is a non-native plant species. You realized that some type of _____, such as pulling out the plants and seeding the area, would be needed in this area.

red

food chains

recreation green

black cherry

water cycles

xylem

chlorophyll

garlic mustard

restoration

white

shagbark hickory

heartwood

The Lorax

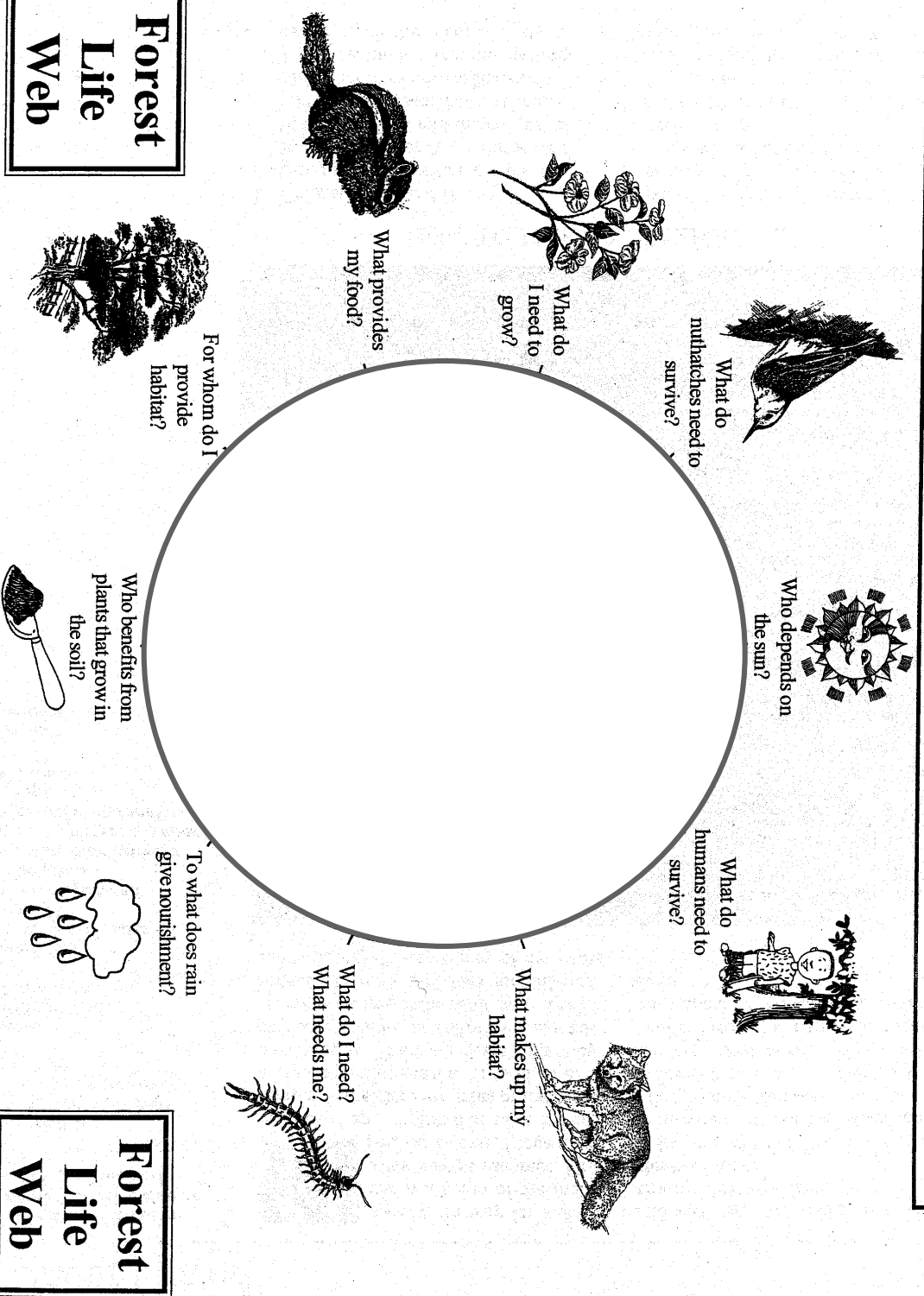
Answer the following questions relating to the story of *The Lorax*.
(Adopted Classroom Activities, Dept. Of E.C.D., Augusta, ME)

- 1) Why did the Once-ler cut down the "truffula trees"?
- 2) Why do the Brown Bar-ba-loots have to leave?
- 3) What kind of problems does the Thneed factory cause for the environment?
- 4) What do you think the Lorax's message "UNLESS" means?
- 5) A Thneed is defined as a fine thing everyone thinks they need (but probably really don't). What are some examples of thneeds- things that we think we need but could do without?
- 6) The Lorax spoke for the trees "for the trees have no tongues". What would you choose to speak for, and what would you say?
- 7) Do you think we need to cut down trees? Why or why not?



Start with the sun and draw lines between things that need each other. When you come to a new element, answer the question to keep on going. How many connections can YOU make?

**Forest
Life
Web**



**Forest
Life
Web**

Under Cover

During the field trip, you were given magnifying glasses and asked to explore the woods and fill out the "Forest Critter Bingo" sheet.

Answer the following questions:

- 1) Where did you find most of the critters?

- 2) What conditions might have made this place the best place for these animals to live? (Consider the soil, dampness/dryness, camouflage, food sources, enemies, etc.)

- 3) What would be some good questions to ask about small animals in the soil and leaf litter?

- 4) Draw a picture of the critters that you found (pill bug, worm, centipede, millipede, spider, etc) and where you found them (under a log, beneath a leaf, on a rock, etc...).

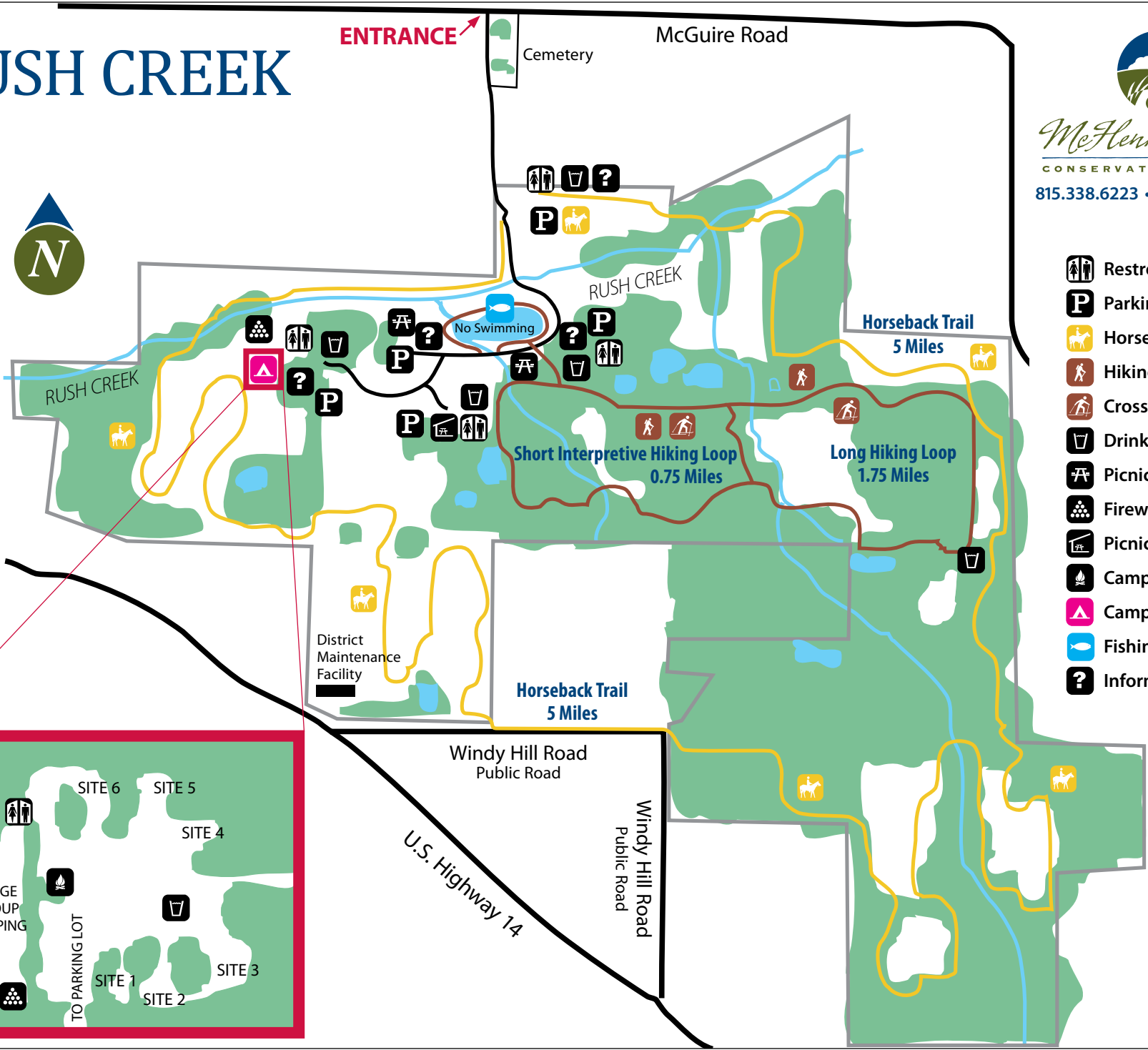
RUSH CREEK

ENTRANCE ↗



McHenry County
 CONSERVATION DISTRICT
 815.338.6223 • MCCDistrict.org

-  Restrooms
-  Parking
-  Horse Trail —
-  Hiking —
-  Cross Country Skiing
-  Drinking Water
-  Picnicing
-  Firewood
-  Picnic Shelter
-  Campfires
-  Camping
-  Fishing
-  Information



RUSH CREEK CONSERVATION AREA

SITE OPEN SUNRISE–SUNSET
ENTRANCE GATES OPEN 8 AM

20501 McGuire Road, Harvard

Main entrance GPS Coordinates:

N42°24.442
W88°35.948
WGS84



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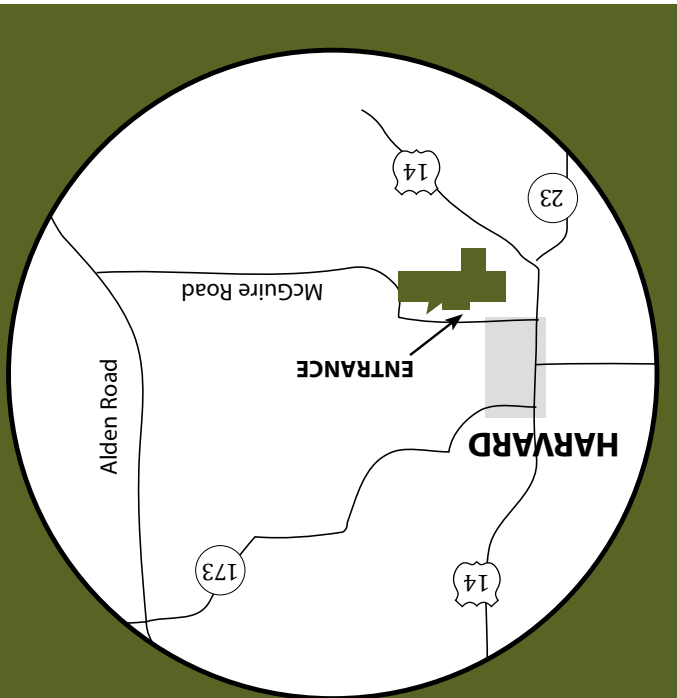
RUSH CREEK CONSERVATION AREA



McHenry County
CONSERVATION DISTRICT

Printed with soy ink on recycled paper.

03/09 3000 (BRN)



LOCATOR MAP

- Site hours are sunrise to sunset or as otherwise posted. Use authorized parking areas only for all vehicles.
- Picnics authorized in designated areas. Groups of 16 or more must secure a permit in advance from the District office. A fee is required to reserve a shelter.
- Alcohol may not be consumed within 100 feet of a parking area. The sale of alcoholic beverages is prohibited.
- Pets must be leashed at all times.
- Camping allowed by advance permit only and is confined to those areas designated as such. Permits are available at the District office, fee required.
- Fires permitted in designated areas only.
- Bicycles allowed only upon the roadways, parking areas and designated bicycle trails.
- Swimming is prohibited.
- All regulations of the Illinois Department of Natural Resources shall apply for fishing unless otherwise posted.
- No person shall in any way remove, disturb, harm, or destroy plant or animal life within conservation areas. The introduction of any plant or animal into an area is prohibited. Feeding of wildlife is also prohibited.

RULES