



Work Begins on Minnehaha Abandoned Mine Land Project

The Indiana Department of Natural Resources - Division of Reclamation has commenced testing and design work for extensive restoration of lands located near the Minnehaha Fish & Wildlife Area.

Covering an area of over 60 acres, the site is a known source of acid mine discharge into nearby Mud Creek. It consists of a gob pile and a single slurry pond (which appears to be a collection of 3 slurry ponds on aerial images).

A slurry pond, or coal slurry impoundment, consists of solid and liquid waste created through the coal mining and washing process. As with other man-made ponds, its lower reaches are typically defined by earthen dams. Gob refers to all other waste material separated from coal, but too large to be carried away in the wash water.

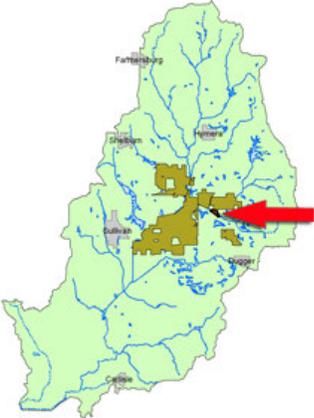
The Division of Reclamation has contracted with Stantec Consulting to complete site investigations including ground water

sampling, surface water sampling, soil sampling, and core sampling. The consulting firm will then develop a comprehensive restoration plan specific for the site.

Approximately \$260,000 will be spent



of this first phase of the restoration work. It is hoped that construction will begin in 2010. Cost of construction is expected to exceed \$1,000,000.



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Special Species

Blanding's Turtle (*Emydoidea blandingii*)



Blanding's Turtle
Image courtesy Vernal Pool Association (www.VernalPool.org)

During the warming spring months, Busseron Creek Watershed motorists often encounter turtles as they travel upland to lay clutches of eggs. Although it is acceptable to pick up and move a turtle crossing a busy road in the direction it was facing, a turtle may not be kept or moved to any

other location. In fact, with the exception of the common snapping turtle, smooth soft-shell turtle, and spiny softshell turtle (which are regulated as game species), it is illegal in Indiana to collect or sell any native species of turtles.

Species native to the Busseron Creek Watershed include: Eastern Box Turtle, Midland Smooth Softshell, Eastern Spiny Softshell, Common Snapping Turtle, Midland Painted Turtle, Common Map Turtle, and the state-endangered Blanding's Turtle.

Description

Named after its discoverer, the Blanding's turtle is medium-sized and can be easily identified by the bright yellow underside of its neck. Its head, tail, and limbs are blue-black, while the underside of its shell (or plastron) is yellow, with brown or black

See a Blanding's Turtle?
Let us know!
Email - lisa@Busseron.org



Earth Day Outdoors in the Inaugural Outdoor Classroom

The students and teachers at Hymera Elementary celebrated Earth Day through various hands-on learning activities, including the creation of all-natural cleaning products, making take-home bird feeders, and potting flowers for Mother's Day.

As part of that celebration, the BCWP supplied enough trowels and plants for every student at Hymera Elementary to transplant a native forb (a non-grass plant) into the prairie



Adult volunteer Todd Norris hands out native plants to Hymera Elementary students.

photo by Lisa Holscher

plot that comprises the school's Outdoor Classroom.

Said teacher and on-site project coordinator Beth Hunt, "I thought flowers would probably be more conducive to having insects and the things elementary students like to study a lot. I am in the process of ordering supplies to create outdoor classroom boxes or totes that other schools could come and use for activities."

The purchase of plants, trowels, and educational supplies was made possible through a \$3000 grant from CSX.

With the inaugural Outdoor Classroom well underway, the BCWP is can now expand the program to other schools throughout the region, capitalizing on each school's unique characteristics as classrooms are designed and implemented. For more information please visit our website:

www.Busseron.org/BCWP_OutdoorClassroom.htm

Teacher's Workshop Upcoming Workshops for Area Educators

For the uninitiated, holding a class outside can be a daunting task. To help educators develop effective teaching strategies, the BCWP is partnering with the Natural Resource Education Center (NREC) to present a seminar for K-12 instructors. This hands-on workshop is designed to introduce fundamental wildlife and ecology concepts.

NREC workshops are eligible for Certification Renewal Units (CRUs) and Professional Growth Points for teacher license renewal in Indiana. Some workshops may be eligible for College Credits.

In addition to practical applications for a classroom, teachers typically leave a workshop with a series of lesson plans. The lesson plans developed by the NREC not only

assist teachers in use of Outdoor Classroom facilities - they are correlated to Indiana K-12 Science Standards.

Watch for more information on the BCWP - NREC Workshop. Meanwhile, please visit the NREC website for a listing of other workshops throughout the state.

Workshops include:

- A 4-in-1 Workshop at Sugar Ridge (Winslow) that is eligible for **9 CRUs** or **3 hours college credit**.
- PreK-8 Basic
- WILD for Home School Educators and Scout Leaders
- Connection Between Literacy and Environmental Education

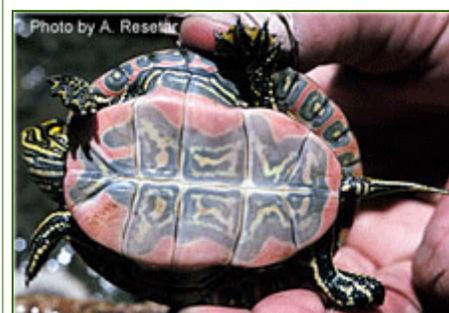
www.in.gov/dnr/nrec/

Other BCWP Turtles



Common Snapping Turtle

Photo courtesy Michigan Dept of Natural Resources



Midland Painted Turtle

Photo courtesy Ctr for Reptile & Conservation Mgmt



Eastern Box Turtle

Photo courtesy North Carolina State Library



Red-eared Slider

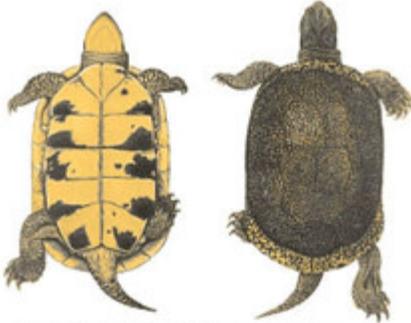
Photo courtesy Wikipedia



Blanding's Turtle

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spots, and is hinged. Its upper shell (or carapace) is usually black speckled with yellow, or horn colored and mottled with brown.



Above illustration: Harold L. Babcock, *The Turtles of New England*,
Memoirs of the Boston Society of Natural History, vol. 8, no. 3, April 1919

The young are patterned differently from adults; their shells help them blend in with their surrounding environment. Before this age its yellow throat markings are not apparent.

Males are larger than females, have longer tails, and their plastrons are concave for mating. The hinged plastron allows the turtle to close the front half of the shell tightly, protecting the soft flesh of its head, neck, and legs from predators. Due to this behavior, this species is sometimes referred to as the "semi-box turtle."

Diet

Blanding's is one of the very few turtles that are semi-aquatic, meaning they can swallow food both in and out of water. Crayfish, insects, snails, frogs and fish make up their water-based diet. On land, the turtles dine on earthworms, slugs, grasses, berries and succulent vegetation.

Habitat

These turtles prefer to inhabit slow-moving or still, shallow waters with ample vegetation in which to hide. They burrow into the silty bottoms of these wetlands to hibernate for winter. Most of the turtle's aquatic habitat are near forested areas.

The wooded areas provide access to terrestrial foods. On hot summer days, when waters are warmer than the turtle's preference, they may be found buried in the cooler leaf litter of these woods. Gravid (pregnant) female Blanding's Turtles will follow streams through forests to nesting areas.

Range

The range of the Blanding's Turtle is concentrated in the Great Lakes region and extends from southern Ontario west including Michigan, Wisconsin, northern Ohio, Indiana and Illinois, southern Minnesota, Iowa and Nebraska. There have also been isolated records from southeast South Dakota and northwest Missouri. Disjunct populations can be found in New York, Nova Scotia and from southern Maine to Rhode Island and southeastern Massachusetts.



Blanding's Turtle range
Image courtesy University of Wisconsin

The Blanding's Turtle is state-listed as endangered in Missouri and Indiana and Threatened in Illinois, Iowa, Minnesota, and Wisconsin. It is a species of Special Concern in Michigan and Ohio

Life Cycle

Blanding's Turtles require 15-20 years to mature. Mating usually oc-

curs in the water during early spring. After fertilization, females will bask in the sun with their heads and legs fully extended in order to speed development of their eggs. This provides more time for hatchling growth before autumn frost and subsequent hibernation, giving the young a greater chance of surviving the winter.



Distinctive yellow neck of the Blanding's Turtle
Image courtesy University of Wisconsin River Falls

Like all turtles, the Blanding's must lay their eggs on land and prefer a patch of sandy ground for nesting. They will travel up to one and a half miles from water to nest, and they usually return to the same nesting site each year. Once they deposit the eggs in the ground, the mothers return to the water, and the sun's warmth is used to incubate the nested eggs. The clutch may contain from 3 to 17 eggs which will hatch in 65 and 90 days.

During the first 24 hours of incubation, many eggs are lost to predation by crows, skunks and raccoons. Hatchlings are about one and a quarter inches long and range from dark gray to greenish in color. Little is known about the habits of the young. They appear to be very secretive, foraging exclusively in aquatic habitats which are densely vegetated. Once they are about 6 inches long they can be seen basking and foraging more easily and often.

Blanding's may live up to 60



Busseron Creek Watershed Partnership - Best Management Practices and Cost Share Programs

Best Management Practice

From Webster's Dictionary:

best (best) *adj* *superl.* of GOOD most suitable, desirable, etc.

management (man' ij ment) *noun* a handling or directing with a degree of skill; control, direction, etc.

practice (prak' tis) *verb* the actual doing of something

A Best Management Practice (BMP) is a way of doing something with the most suitable control. In the world of watershed management, a BMP is a most suitable way of doing something that will improve surface water quality.

We often think of BMPs as *things* rather than actions. Common BMPs in agriculture include:

Cover Crops - to capture and hold nutrients such as Nitrogen over the winter and to help prevent surface soil erosion.

Buffer Strips - A strip of grass or other vegetation around streams, ponds, and other areas such as woods and roads. The strips trap surface run-off and act as a filter. They may also provide habitat for beneficial insects, birds, and other animals.

In the next 18 months, over \$100,000 of projects will be put in place in our watershed.

Common BMPs for towns and residences in general include:

Rain Gardens - a planted area designed to collect run-off from roofs, sidewalks and driveways and allow it to percolate *into* the ground rather than run into storm sewers. This not only lessens the load on our over-burdened storm sewers, water that drains through a rain garden is filtered by mother nature as it recharges our groundwater.

Septic Tank Maintenance - Most homeowners do not realize that septic systems need regular feeding and

maintenance. A septic tank that has not been cleaned out in over 5 years is likely to allow solids, nutrients, and disease-causing bacteria to enter the drain field... and pollute our water. Systems located near field tiles or with "fingers" draining into streams are typical sources of e. coli entering surface water. (E. coli from septic systems are one of the major pollutants of the Busseron Creek Watershed.)

Some BMPs have added benefits. For example, a wetlands designed to filter nutrients and sediment in a stream can also slow the speed of surface water and provide storage for run-off. Water velocity is a major contributor to stream bank erosion, especially during periods of heavy rainfall. And of course water storage helps reduce flooding, especially the flashiness often experienced after heavy rains.

From *not* dumping trash into ditches to "keeping the soil on the land", environmental BMPs are a common sense approach to sound conservation of natural resources.

Cost Share Program

From Webster's Dictionary:

cost (kôst) *noun* the amount or equivalent paid or charged for something.

share (sher) *noun* a portion belonging to, due to, or contributed by an individual or group

program (prô' gram) *noun* a plan or system under which action may be taken toward a goal

A Best Management Practice Cost Share Program simply shares the cost of BMP installation. Different agencies have differing levels of cost-share. Typical funding includes:

EPA Section 319 funds can pay up to 75% of installation costs.

Lake and River Enhancement (LARE) grants typically fund 80% of

a BMP.

The NRCS Environmental Quality Incentive Program (EQIP) may fund a cost-share rate of 30, 50 or even 90%. It may also provide funds in the form of flat practice rate, or a per acre incentive rate.

Different programs can often be mixed together to nearly fund all of a BMP installation. And most programs allow in-kind contributions as matching funds. (In-kind can be labor, use of equipment - just about anything other than money.)



Rain Gardens captures and stores stormwater run-off, permitting it to be filtered and absorbed by the soil. Photo courtesy Cuyahoga SWCD

What to Expect

BCWP stakeholders and Steering Committee members are at work developing a solid mix of BMPs to address the wide variety of problems found in area surface waters. In the next 18 months over \$100,000 of projects will be put in place in the watershed. The work will be targeted to address priority areas.

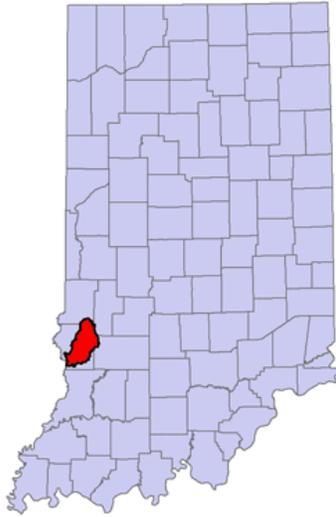
You can think of priority areas like an Emergency Room doctor assessing a patient. If a man with cancer and pneumonia has nearly amputated an arm, chances are the doctor will take care of the arm and blood loss first. Then he will treat the pneumonia. And when the patient is healthy enough, the cancer will be addressed.

And sometimes there aren't answers... so you treat what you can.

The same holds true for the watershed.



Busseron Creek Watershed Managed Lands



Legend

City/County Properties

IDNR Properties

MINNEHANA FISH AND WILDLIFE AREA

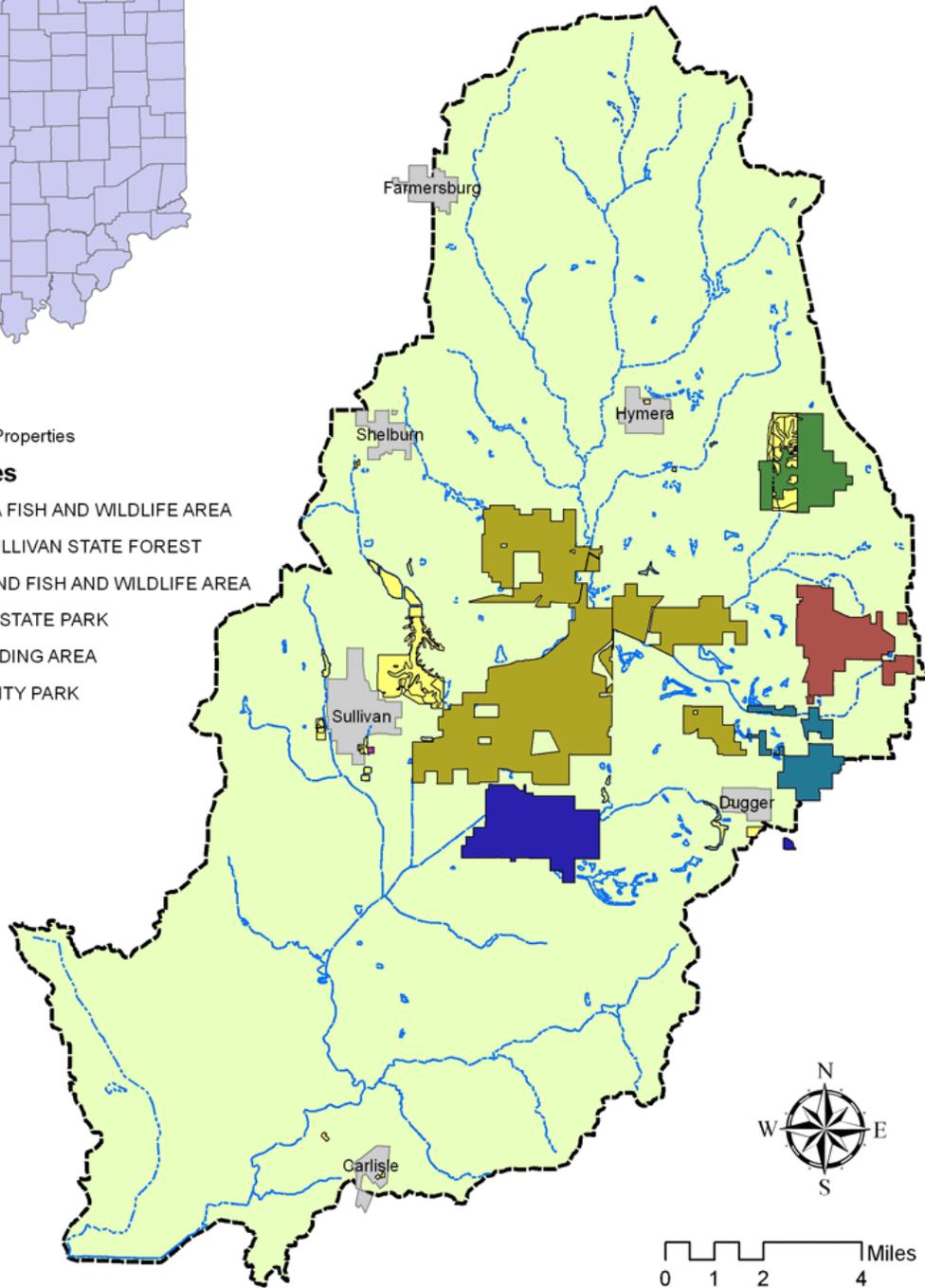
GREENE-SULLIVAN STATE FOREST

HILLENBRAND FISH AND WILDLIFE AREA

SHAKAMAK STATE PARK

REDBIRD RIDING AREA

SULLIVAN CITY PARK





What Best Management Practices should be implemented? - Help us determine our primary focus.

Please rank these practices from best to worst.

1. What type of practices should be protected or encouraged adjacent to streams and creeks?

	Best	2	3	4	5	Worst
Wooded Areas						
Wetlands						
Filter Strips (Native Plants)						
Filter Strips (Cool Season Grasses such as Fescue)						
Levees						
Other _____						

2. What type of practices should be implemented in agricultural lands?

	Best	2	3	4	5	Worst
Wetlands used as nutrient / sediment trap						
Cover (i.e. grasses) at Tile Stand-pipes						
Cover Crops						
No-till Farming						
AutoSwath Technology						
Other _____						

3. What types of practices should be implemented in non-agricultural lands?

	Best	2	3	4	5	Worst
Storm Water Management						
Road and Ditch Maintenance						
Timber Harvest Management						
Invasive Species Control						
Private Septic Improvements						
Other _____						

You may mail your responses to: BCWP, 307 Hopewell PO Box 468; Farmersburg, IN 47850 Please include your Name & Contact information so that we may verify your responses if necessary.

A link to an electronic version is available through our website. www.Busseron.org



Programs for YOU

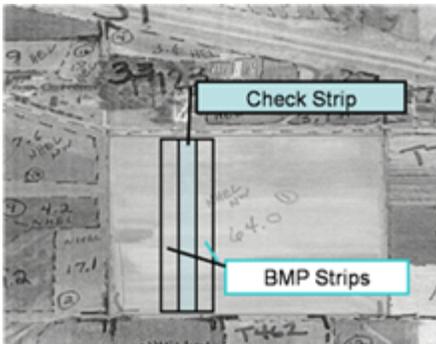
American Farmland Trust BMP Challenge

The following is reprinted from the American Farmland Trust website www.farmland.org :

Best Management Practices (BMPs) support conservation goals like protecting against soil loss and keeping nutrients from leaving the farm. When done right, BMPs can improve the environment while also improving the farmer's bottom line.

But for a farmer, implementing BMPs can feel like making a bet against their income. We're asking farmers to believe that lesser amounts of fertilizer, sometimes substantially less, will deliver the same yields. Or use reduced tillage, which reduces erosion but can delay soil warming and plant growth.

AFT's innovative solution, the *BMP Challenge*, overcomes this challenge by guaranteeing against any potential loss of income for farmers who reduce fertilizer use or utilize reduced tillage practices.



Check strips are used to compare BMPs with traditional practices.

How the BMP Challenge Works

The BMP Challenge for Nutrient Management and BMP Challenge for Reduced Tillage pay farmers cash if yield and income are reduced while participating in the BMP challenge. Unique performance guarantees allow farmers to try conservation practices on their own land, observe performance over time in side-by-side comparisons, and evaluate economic impact, with out risk to income due to yield loss.

Traditional fertilizer rates or tillage practices are used on a check strip in each enrolled field. The BMP fertilizer rates or tillage practices are used on the balance of the field. Crop yields area assessed at harvest, and any farmer experiencing lower yields with the BMP fertilizer application rate or tillage practice will be reimbursed the difference. In any one year, BMPs may not result in maximum yields, but they are designed to deliver maximum economic returns over time.

BMP Nutrient Challenge

BMPs are designed to save farmers money. Recommendations area made based on field history and soil test results to cut fertilizer costs while maintaining yield.

1. Farmers enroll one or more fields - before applying commercial fertilizer - up to 160 acres per farm.
2. Crop advisor prepares recommendation.
3. Farmer applies traditional practice to check strip. On the balance of the field, the new practices are applied.
4. Farmer manages the entire field the same way. At harvest, farmer and crop advisor assess yield v. check strip.
5. Farmer is paid if there is a loss in yield minus fertilizer savings.

Farmers will earn as much as using typical fertilizer rates, and in most years, will make a profit. Participants help us expand the *BMP Challenge* to more farmers by reinvesting a portion of their savings up to \$6/acre back into the program.

Reduced Tillage BMP Challenge

Reduced tillage BMPs are designed to save farmers money, by

providing technical assistance to develop the best reduced tillage practice for fields based upon location and soil type.

1. Farmers enroll one or more fields - before tillage - up to 160 acres per farm.
2. Conventional tillage practices are used on a check strip located by a crop advisor. On the balance of the field, the reduced tillage will be used. Farmer manages the entire field the same way.
3. The crop advisor will help set up tillage equipment and visit the farmer during the season to assess crop progress. The advisor will also work with the grower to help identify and help-address any tillage-related issues.
4. At harvest, farmer and crop advisor assess yield v. check strip.
5. Farmer is paid if there is a loss in yield minus reduced tillage savings.

Growers earn at least as much as with conventional tillage practices, and in most years, will be putting more dollars in their pocket by spending substantially less in fuel and equipment costs. Participants help us expand the *BMP Challenge* to more farmers by reinvesting 1/3 of their savings (up to \$6/acre) back into the program.

Eligibility

Farmers in DE, IA, ID, IL, **IN**, MD, MI, MN, MO, NC, NE, OH, PA, VA, or WI and grow corn for silage or grain are eligible. Sweet corn, popcorn, or corn planted for wildlife are not eligible.

For More Information

Visit the BMP Challenge website: <http://bmpchallenge.org>. Call BMP Challenge at 608.232.1425

You can also contact your local NRCS District Conservationist, SWCD office, or certified crop advisor for more information or to enroll in the program.

Newsletter

Busseron Creek Watershed Partnership
Farmersburg Town Hall
307 Hopewell, PO Box 468
Farmersburg, IN 47850

Save a Tree!

Get your next newsletter via e-mail. Just e-mail
Lisa Holscher (lisa@Busseron.org)

Call for Volunteers

- Priority Area Assessment
- Ride-along to Collect Water Samples
- Habitat Quality Assessments
- Watershed Management Plan Review and/or Development
- Financial Plan Review and/or Development

To:

Special Thanks To:

The Town of Farmersburg & Sullivan Learning Center for ongoing use of their facilities.

The Center for Reptile and Amphibian Conservation and Management - Indiana University Purdue University Fort Wayne.
Herpcenter.ipfw.edu

Indiana Turtle Care
www.IndianaTurtleCare.com

American Farmland Trust
www.Farmland.org

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Bruce Marheine
National Wild Turkey Federation
NRCS
Natural Resource Education Center
Emily Pugh
Jack Robbins
Stantec Consulting
Tammy Swihart
Deann Talley
U.S. Army Corps of Engineers
Vincennes YMCA
Mike Wardell

And our partner SWCDs:

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