



Follow the yellow brick road... by Kimberly Balke, CRA Biologist

Or if you live in rural Northern Michigan you may follow the steep, sandy road with a small rusty culvert at the bottom of the hill instead. Over the last 15 years CRA has played an increasing role in working with our County Road Commissions to improve our road systems where they intersect our river systems. As a conservation-based group motivated by improving water quality and instream habitat, it is a common sense responsibility. It is not an easy responsibility though.

■ Fixes are expensive. Today we are doing things the right way, installing larger culverts, and sometimes bottomless structures like bridges to allow for natural stream substrate and wide stream channels. Pavement, curbing and diversions are the best ways to channel runoff away from the stream in steep areas. Fifty to a hundred years ago, road building was geared more to getting people and cars safely across the water, regardless of impacts to the river.

■ Finding money is challenging. CRA just wrapped up a 3-year, \$360,000 effort with Benzie Road Commission in the Betsie River Watershed that included funding from 12 different sources, and some match from the Road Commission as well. Juggling all the reporting, timelines, and requirements with a dozen state, federal and private funders has been a sizeable task.

■ Natural site conditions require extra attention. Muck and marl soils may need the pilings that support a bridge to be driven down 20 feet or more. Artesian springs on the Green River required heavy duty concrete footings to support the bridge deck since they could better withstand upwellings of groundwater. Road crossings in hilly areas may have a culvert that has 20 to 40 feet of fill above it; that means crews have to dig over 20 feet down to remove the culvert and place a new one. Needing specialty equipment and more labor means needing more money!

Despite the challenges we come across, road crossing improvements are simply a requirement for ensuring a healthy watershed. A culvert that is too small for a stream can act as a dam, preventing the natural movement of sediment, woody debris, and fish. Rain and snow melt that run down a dirt road into a stream can carry tons of extra sand that will cover gravel beds and fill in the channel. Multiple culverts at a crossing are generally no longer permitted by DEQ because if one of the smaller culverts fails or is plugged with debris, all water is forced into the remaining culverts. Pool formation resulting from undersized structures can warm stream temperatures,

negatively impacting fish and aquatic insect habitat. The road fill above a culvert, if not properly stabilized with vegetation and rock, can wash into the stream as well.

CRA works on a dozen rivers, and a medium sized watershed like the Betsie River has over a hundred crossings, with almost half of them in need of some type of repair. That can be a daunting task. However, one of my favorite quotes is, "I'm not telling you it is going to be easy - I'm telling you it's going to be worth it" (Art Williams). CRA thinks that our streams are worth it.

Our Road Commissions simply can't afford to do these projects alone. We all use our roadways and hopefully care enough about our streams to be willing to help out. Just by utilizing Road Commission engineers, work crews and equipment, we can often save up to 30% in costs. Throughout Northwest Michigan over the last 15 years, CRA and our river partnerships have successfully improved 97 road crossings leveraging \$9,094,000! Thank you to all of our partners for the vital role you play in improving Northern Michigan's road/stream crossings. We couldn't have done it without you!



Inadequate road crossings can lead to failure in extreme rain events. Tons of sand dumped into a stream takes years and years to wash out of the system. The rains this June washed out over 60 crossings in Northern Michigan.

The New Pine 220th Bridge

Beginning in Osceola County and flowing westerly through the counties of Lake and Wexford before joining the Manistee River in Manistee County, the Pine River system is an important cold water tributary to the Manistee River. This headwaters crossing has been a target for restoration for a number of years and had been failing and contributing sediments to the Pine for decades.

CRA, in cooperation with the Osceola County Road Commission, sought grants from the Forest Service, the Fish and Wildlife Service, NRCS, and Trout Unlimited to raise the balance of funds necessary to implement a timber bridge solution at the site. In late 2007, funds were made available to the road commission and construction was completed this past September. Thank you to the Osceola County Road Commission who contributed in excess of \$90,000 of labor and equipment to the project and Burdell Township who covered \$165,000 of the costs.



Green River Bridge Completed!

The Green River is the largest tributary to the Jordan River, a state designated Natural River and Blue Ribbon Trout Stream. Though the Green River has excellent water quality and winds through a heavily forested corridor, the stream does have some problems. The road crossing at Green River Road was one such problem. This site was comprised of three old, corroded culverts in various sizes up to 36" in diameter. The culverts were undersized for this 20' wide stream and caused pool formation, embankment erosion, channel constriction, streambed scouring, and fish passage problems. CRA worked with project partners to design and build an 18' wide timber deck with concrete abutments on spread footings to accommodate the natural stream shape and the artesian springs found in the immediate project area. The new bridge allows for a natural stream bottom and completely reconnects the upstream and downstream

portions of the Green River. Total project cost was \$161,500 and included donations from the US Fish & Wildlife Service, Frey Foundation, Oleson Foundation, Charlevoix County Community Foundation, Mr. Michael Dow, Frey Family Fund, Nestle Ice Mountain, USDA Conservation Innovation Grant with Little Traverse Bay Bands, and River Care support from Grand Traverse Band of Ottawa and Chippewa Indians, and DTE Energy Foundation. Thanks to Wade Trim, McDowell Construction, and Antrim County Road Commission for their construction and engineering services, as well. Surfacing of the bridge will be completed in the spring and a site showing will be held at that time, so stay tuned!



The new Green River Bridge was a successful, cooperative effort of over a dozen partners resulting in a dramatic improvement and natural stream bottom.

Tippy Access Improvement

The Manistee River below Tippy Dam is likely the most heavily fished public water in the state of Michigan in terms of angler hours expended annually. With salmon fishing in the fall and steelhead runs in both spring and fall, anglers use the public land on both the south and north sides for access all year. There is no question that all that fishing pressure is taking a heavy toll on the stream banks downstream from the dam. New boardwalks and railing downstream from the Tunk Hole, repairs

on failed stairways and installation of new ones were recently completed. These projects will result in an improvement in foot related erosion adjacent to the river's edge and make it easier to access certain sections of popular stream frontage that hold fish. In addition, the newly funded design project for stabilization work on the south side across from the boat launch will further improve angler access opportunities and prevent excessive sedimentation to the stream.

Big Sable Big News

As the snow flies and many of us change our gear for the seasons, staff at CRA are still busy on the river wrapping up 2008 projects. After a successful year of fundraising, CRA and partners have completed 5 stream bank improvements and placed large woody debris fish cover structures on approximately ½ mile of river. Next year, CRA and the Big Sable Watershed Restoration Committee are planning to restore the last severely degraded site and several moderate to minor sites identified in the Big Sable Watershed Inventory.



Staging red pines and white oaks to construct fish cover structures.

The Removal of the Jordan River Electrical Weir



Removal of the barrier consists of a wooden box structure running the width of the river, anchored to steel sheet piling on both ends. A wooden retaining wall is in place on both ends of the structure, which would also be removed and the banks restored. An adjacent generator shed, underground wiring and fencing around the area would also have to be demolished and removed and the site restored.

A total of \$55,000 has been raised for the removal of the defunct electrical lamprey barrier on the Jordan River with donations from the Charlevoix County Community Foundation (\$10,000), Great Lakes Fishery Trust (\$25,000), MDNR Inland Fisheries Grant Program (\$10,000), and US Fish and Wildlife Service (\$10,000). A special thanks goes to the Grand Traverse Band for supporting our proposal as well.

The electrical lamprey barrier has been in place at the lower end of the Jordan River since 1988. Unfortunately, the barrier began to fail after ten years of operation and in its current condition would require over

\$250,000 in repairs to make it fully operational. The USFWS has since turned to chemical treatments (TFM) to reduce lamprey populations rather than continue to operate the barrier. Thus, the barrier remains as an obstacle to some fish, stands in disrepair at a public access site, and no longer serves any practical purpose. The partners involved have agreed that its removal is in the best interest of the watershed and this is identified in the Jordan River Assessment written by MDNR Fisheries Division.

The barrier is located just two miles upstream from the mouth of the Jordan River into Lake Charlevoix. Removal of the barrier will reconnect the lower two miles of the Jordan with the upper 21 miles of river and is scheduled for the summer of 2009. Once completed, it is anticipated that the stream will have unfragmented resident fish populations, and that other migratory fish such as suckers would be able to reach upper stream sections. In addition to the fish population benefits, the site will be restored aesthetically as well, with walls and fence removed and native plants established.

Wild Link Grand Traverse Expansion Keeps Rolling

During the last few months the Wild Link program has continued to sign up new private landowners in the Grand Traverse Region. The most recent additions are four private parcels along regional wildlife corridors totaling 470 acres. All four of these landowners are primarily interested in improving their land for wildlife and protecting the unique natural resources of their properties. Management plans for each of these landowners will be delivered soon and will lead to five major habitat improvement projects on private landowner parcels. The project list includes:

- Establishing native warm season grasses on nearly 17 acres of land.
- Restoring wetland and pond habitat on drained agricultural land on two different parcels through the US Fish and Wildlife Service Partners Program.

- Thinning a large red pine plantation to provide income and make way for restoration of northern hardwoods and early successional forest habitat.
- Conducting a prescribed burn in a wetland area being overrun by shrubs and invasive species.
- Coordinating the distribution and planting of native trees and shrubs to be planted along wildlife corridors in the Little Traverse and Grand Traverse Bay regions.



Dense Red Pine stand scheduled for thinning this winter.

Thank you for your recent support of CRA, River Care™ and Wild Lin^{KT}

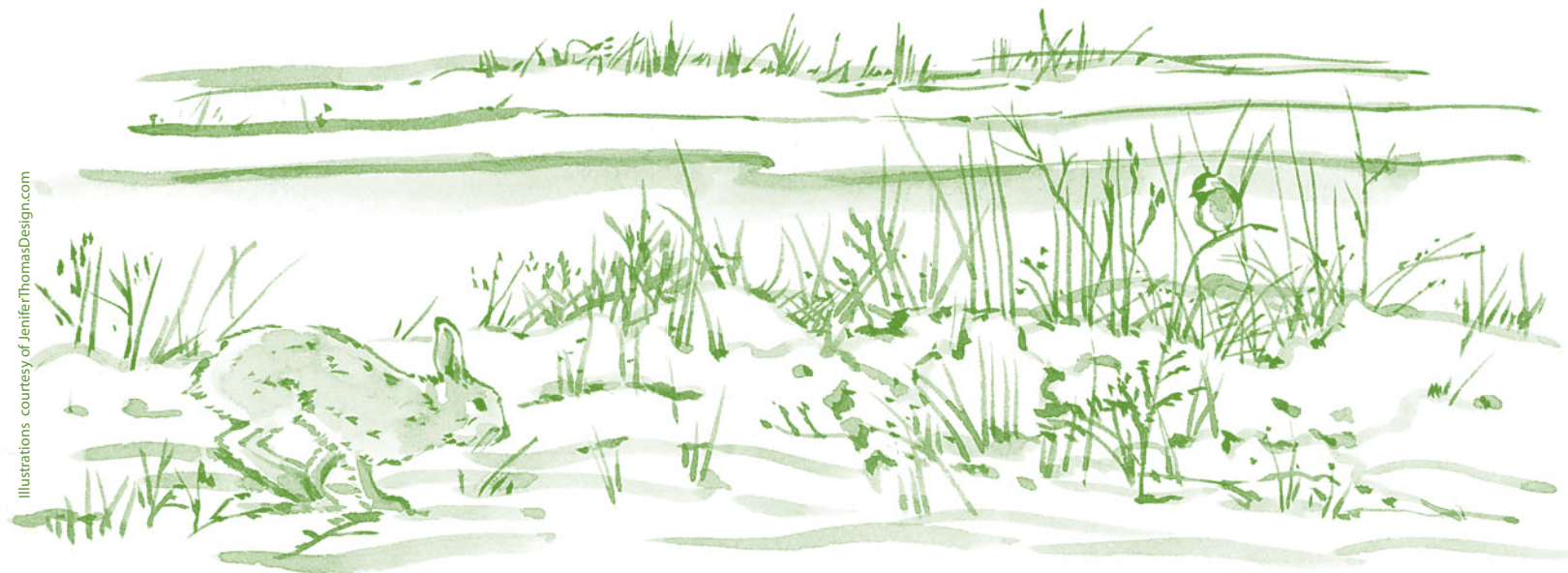
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Good Luck Mark!

After a 10 year career at CRA restoring Northwest Michigan's natural resources, Mark Johnson has embarked on a new adventure. He recently accepted a position teaching vocational classes in Agriscience to students in Wexford County. While he will be missed by many of us, we at CRA are happy that Mark will have the opportunity to inspire young people to become stewards of the land.



Check Out the New Wild Link Section of Our Website

Wild Link Biologist Eric Ellis teamed up with Tim Barrons of Byte Productions in Traverse City to update the Wild Link portion of the CRA website. This newly updated tool currently contains downloadable information on the Wild Link program, wildlife corridor maps, info on key partners, and the first draft of the Ransom Lake Management Plan that is under consideration by Almira Township. This site will be updated regularly. Stop by and take a look!

The unique parasitic Ghost Plant thrives at Ransom Lake Natural Area. Learn more at www.rivercare.org.



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Thank You For Your Support!

Real Good

My son recently gifted me a subscription to a magazine called GOOD. I not only like the magazine, I really like the simple concept that the name embraces. To me, it addresses the opportunities that we have individually and as a community to make a difference by seeking "good". The good news is that it is pretty easy to do. Possibilities are abundant. Whatever your passion, concern, motivation, or philosophy; choosing to do good can be incorporated in to your life.

I feel strongly that the Conservation Resource Alliance is doing some real good. This beautiful corner of Michigan deserves to be cared for. Our rivers, land, and wildlife are what make this one of the most special places on the planet. If each one of us can find a way to help, these places will be enjoyed for many years to come. The simplest act to accomplish this is to support the good organizations that have strong and successful missions to restore and protect our natural resources. I hope that you consider CRA one of those groups and make a tax-deductible gift to CRA this month and in the upcoming year. Your contribution will go to work making a difference for the places that we all want our children and grandchildren to experience. That's a good thing.

You can use the contribution form in this newsletter, give online at www.rivercare.org, or call your gift information in to us at 231-946-6817. We would also like to discuss helping you make CRA a part of your estate and planned giving considerations. Please contact us for more information.

Thank you!

Matt Thomas, *CRA Development Coordinator*



Conservation Resource Alliance

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Stewardship Spotlight - Nature's Reflections

Time flies! It's been three years since our friend, Jim Haveman, retired after nearly three decades of dedicated service to northern Michigan's natural resources. We get asked often what Jim is up to. Well, in addition to spending a whole lot more time fishing, hunting, and hanging out with his granddaughters, he has been able to devote his attention and talents to his taxidermy business, Nature's Reflections.

Capturing that special memory in a custom mount is Jim's specialty. Virtually any critter that swims, flies, or walks out in nature can be artistically represented and enjoyed for years at home or office. Last year Jim was commissioned to mount two mature bald eagles that were engaged mid-flight and perished in an encounter with a power line. With 32 years taxidermy experience, Jim and Nature's Reflections can be trusted to deliver quality and value in a timely manner.

In addition to the many ways that Jim continues to give back to the community, he has contributed interpretive specimen mounts to numerous educational organizations. CRA is proud to have Nature's Reflections as a supporting member, helping us care for northern Michigan's diverse resources.

You can contact Jim in his studio at 231-947-3699 or email him at: naturesreflec25@hotmail.com.



Combining art and science, Jim Haveman keeps busy crafting memorable taxidermy.