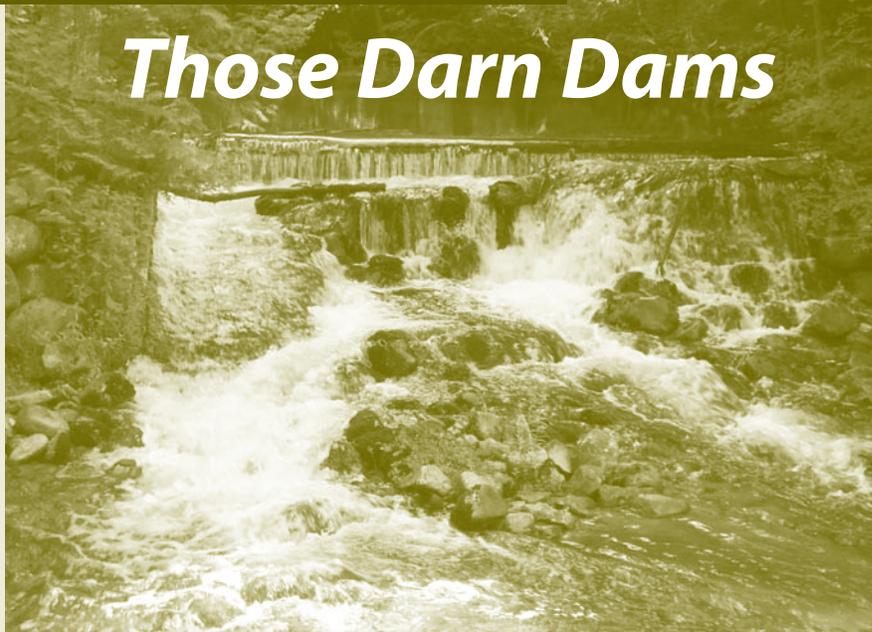


It seems that everywhere you look these days there is discussion in the media and conservation circles regarding dams. The recent failure of dams on the Dead River near Marquette has fueled discussions regarding flood events and dam safety. In the Manistee watershed alone, there are 63 known dams, some in severe disrepair. The issue of what to do with aging, outdated, and often failing dam structures is the topic of much discussion among conservationists, environmentalists, and resource managers alike. But before debating the pros and cons of dams, let's review some facts about dams in Michigan and the regulations that guide their operation and maintenance.

According to Michigan Department of Environmental Quality records, Michigan has over 2500 dams, fewer than 100 of which are used to generate electricity. The Federal Energy Regulatory Commission, or FERC regulates dams that are used to generate hydropower. FERC requires those dams be licensed, maintained, and operated according to federally mandated guidelines, regardless of ownership and location. Of the remaining 2400, 1048 are regulated by the State of Michigan under parts 307 (Inland Lake Levels) and 315 (Dam Safety) of the Natural Resources and Environmental Protection Act of 1994. The rest, approximately 1250 or so, do not require regular inspections by the state because of their size (impoundment size less than five acres, head height less than six feet). So, we know there are at least 1250 dams scattered throughout Michigan that are privately owned, privately operated, and will some day require their owners to spend money on maintenance or removal. If nothing is done with these structures, eventually they will all fail. It is important to note that alterations to dams not regulated by parts 307 or 315, including their removal, would likely still require a permit from MDEQ.

So, back to our original issue. What do we do with these structures as they age, become liabilities, and require attention? What happens when a dam that generates hydropower costs more to maintain than it produces in power revenues? These are questions being debated throughout the country as many dams currently in service have already exceeded their design life, and the answers are rarely easy.

Those Darn Dams



When considering what to do with an aging dam, careful thought must be given to several key questions. What purpose does the dam serve? Are there structural issues and liabilities associated with keeping the dam in place? Is removal a viable option? What permits might be required for repairs or removal? What social issues need to be considered? Should a professional engineering firm be hired? Is there funding available to help? Obviously, the answers to these questions are different for every structure, and each dam needs to be considered individually.

At the present time, CRA is involved in several different projects involving dams in at least three different watersheds. Some are relatively straightforward, some less so. A careful analysis of owner objectives and related environmental impacts will generally be the driving force for decision making, particularly in the case of smaller structures that aren't generating hydropower. For example, consider a private landowner who owns property that has an aging dam structure that impounds three acres of water on a cold water tributary. Let's say the structure is in disrepair and the landowner is not using the impoundment for recreation, and the dam is serving no useful purpose. As we discussed above, up to half of Michigan's dams may fall into a category similar to this scenario. While many small dams may have a recreational component, others serve only to impound sediment, fragment fish populations, and warm impounded water. This scenario may be the best case for a removal, and often groups like CRA can help a landowner find funding help to plan and implement a removal. But, with any removal project, positive

environmental impacts must be weighed against potential negatives, such as downstream movement of contaminated sediments or upstream migration of invasive species such as sea lamprey.

Now consider scenario number two. A dam owned by a small municipality is regulated by the Dam Safety statute, and needs serious repairs. A boat launch and park are present around the impoundment, which is used for swimming, fishing, and other recreation. While the dam certainly has negative environmental impacts, social considerations may very well outweigh environmental concerns, meaning that the dam owners have a decision to make, and removal may not be their best option. While dollars can often be found for removals, finding funding help for repairs to failing dams is much more difficult, leaving our municipality in the unenviable position of having to find funds for repairs or face possible legal action if mandated repairs aren't completed.

While these two scenarios are quite different, they are not atypical of many situations currently playing out across the state. Unfortunately, the state's responsibility of regulating dams for the safety of the public often puts them at odds with dam owners that feel they aren't financially able to fund necessary repairs

to structures that have outlived their usefulness. The key to resolving these issues is good communication between owners and regulators, though it often boils down to dollars and cents. The finances will often steer owners toward removal, particularly in cases involving regulated dams where public safety is a concern and there is no revenue being generated, as may be the case with hydropower facilities.

While this doesn't even scratch the surface of issues to be considered when it comes to dam removal versus dam repair and retention, it should give some food for thought. These are complex issues that often pit wildlife concerns against fishery concerns, or social concerns against financial and legal. In the end, our streams and rivers are generally better off without dams and the negative effects that come with them, but when it comes to dams, one size definitely does not fit all!



Timber Bridge A Reality

Hard work, good science, lots of cooperation and patience has been the formula for making the replacement of the culverts on Oliver Road over Emmet County's Carp River a reality. The new Michigan Timber Bridge project, completed in November, will serve to reduce sedimentation and allow easier fish passage to this northern Michigan stream. CRA and partners have learned a lot through the process. Working together, the US Fish & Wildlife Service, Emmet County Road Commission, Baiardi Family Foundation, Petoskey-Harbor Springs Area Community Foundation, Northwest Design Group, MDEQ, MDNR, the adjacent

landowners, CRA and other partners have negotiated a practical approach to move this project forward. A comprehensive Biological Opinion helped the team plan that considered factors such as the existence of the federally listed endangered Hungerford's Crawling Beetle in the vicinity of the project.

A ribbon-cutting event will be held next spring. Paradise Lake Association representative Cathy Freebairn has suggested a smaller version of the Mackinaw Bridge event, such as a "beetle crawl".



Before



After

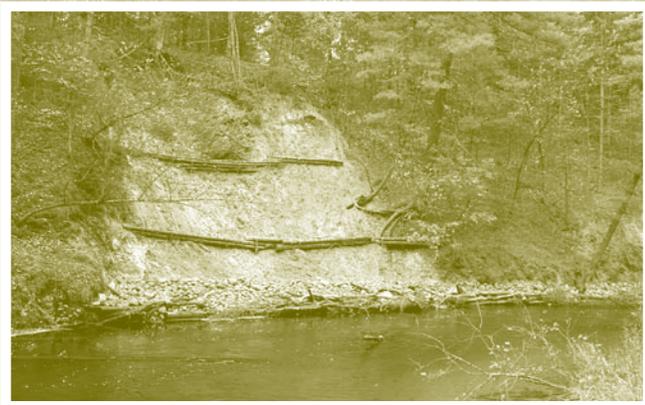


During

Pine River Inventory Hits The Web

The stream bank erosion sites on the Pine River haven't been collectively documented since 1986, and it was time for an update. That effort spurred the Pine River Restoration Committee to take on an update of stream crossings in the watershed as well, and a \$40,000 grant was awarded from the National Forest Foundation to update both inventories in an electronic format that could be web hosted and updated as sites are completed.

Fieldwork was completed primarily during this past summer, and data was compiled in a CD format that is in the final stages of production at this time. Approximately 170 road crossings were visited and documented with measurements and digital photos. Starting in the upper watershed in Osceola County, 105 stream bank erosion sites were documented as well. The data will be available on the web some time in January at www.liaa.info/crabmp. Click on the Pine. Other watersheds, including the Betsie and Little Manistee, are already there. Many thanks to CRA summer intern Chelsea Lowes for her help completing the fieldwork and data entry on this project!



Mission Complete

This fall marked the end of a multi-year effort to address serious erosion sites on the Baldwin River, an important tributary to the Pere Marquette. This year, five sites were addressed on private property, utilizing over 400 cubic yards of fieldstone and nearly 200 feet of platform fish cover. Project work was funded with landowner cost share dollars, private contributions, and federal grants. Work was completed late in the fall, with access trail closures completed by the end of November. The sites were planted this fall, and will be planted again in the spring. Thanks to the many donors who made the project possible!

Wild Link Excites Landowners

Landowner Craig Bonter explains his goals in participating in the Wild Link program to a group that included Rotary Charities' Beth Buelow, Michigan DNR's Brian Mastenbrook, Jack Sheets from the local Trout Unlimited chapter, Alisa Gonzales-Pennington from Michigan's Coastal Management Program, and Kristine Huizen from the Frey Foundation. The group toured properties where Wild Link projects are underway. Bonter noted that the concentrated Wild Link activity in the vicinity of his property involves over 1,500 acres and connects more than 10,000 acres of important habitat on public lands that otherwise could have become disconnected by development or improper management.



Good Luck Fish!

There are a couple hundred new salmon swimming around Mason County. This summer the Big Sable Watershed Restoration Committee and Fin and Feather Club of Mason County supported 2 Salmon in the Classroom projects at Mason County Eastern Schools and Freesoil Schools. Salmon eggs are obtained through MDNR-Fisheries, raised in aquariums in the classroom, and released into local streams by students in the spring. It was exciting to see the students very eager to help in any way that they could.

Thank you for your recent support of CRA, River Care™ and WildLink™

Benzie Fishery Coalition	Foundation	Richard Forrest	Robert Nagrant	Bob and Charlotte Streit
Century 21	Pine River Association	Fred and Patricia Fragomeli	Jack Norris	William Sundstrom
Colfax Township	Rotary Charities	Wayne and Janet Gay	Thomas O'Bryan	David Swan
Consumers Energy Foundation	Sara Lee Bakery Group	John Gorys	Aggie Ochs	Richard and Martha Terpstra
DTE Energy Foundation	Springdale Township	Thomas Gotts	David and Patricia Owel	William and Gloria Thomson
Fishbeck, Thompson, Carr & Huber	Weldon Township	Jeff Graft	Tom Pangborn	Jack Van Hoef
The George Fund	Anonymous	Barbara Hansen	Sue Peters and Dave Murphy	George Wakulat
Jenifer Thomas Design & Illustration	Jeff Alandt	Matthew and Jamie Harju	Chris Pierce	Van White
Jerry Lewis Photographers	Steve Anable	Richard Heydenberk	Robert Portenga	Chad and Kathy Williams
Lee Wulff Chapter of Trout Unlimited	Bob and Judy Baker	Lou and Ellen Holstad	Joe Quandt	David Wright
Manistee County	Louis Baldori	John and Joan Hutto	David and Betsy Randall	Ross Zeerip
Manistee County Sport Fishing Association	Kalvin Barnett	Gary Jarrold	Steven Rapanos	In honor of Preston Rowley; Madelyn, Morgan, Marissa and Mya Kohler; Skip Mebert Collision and Jan's Daycare
Mason County Fin and Feather Club	Jim Bedford	Tom Jobson	Jerry and Jane Reich	In honor of the Nye-Simpson wedding guests: Julie Nye
Michigan Steelhead & Salmon Fisherman's Association	Brian and Carrie Bourdages	William Jones	Richard Reid	In memory of Dee Thomas: John Thomas
Nick's Riverbend Charters	Patricia Carlson	Gene and Betty Kaser	Dean Rhoads	
Pere Marquette Watershed Council	Brian and Monica Carman	Pat and Mary Kelly	Joan Rooke	
Petoskey-Harbor Springs Area Community	Dennis Carney	Pat and Jana Kochanny	Dick and Lu Schwikert	
	Yvon Chouinard	Joe Kutkuhn	Bernard and Phyllis Senske	
	Mike Connors	Tad Lane	Catherine Seroczynski	
	James Coursey	Joyce Lincoln	Mike Shirley	
	Chris Cuffaro	Kurt Lindland and Laura Mudd	Holly Stearns	
	Edwin and Carol DeVilbiss	Paul Maxbauer	Alan Steinman	
	Charles Dabee	Scott and Barb Myckowiak	Ed Stilwill	
	Richard Ford			

Stretching for \$1 million

Our cold-water trout streams have many passionate friends and users that enjoy the benefits of keeping these resources healthy. Fortunately, there are some guardian angels out there as well looking out for the future of these gems. With the addition of a generous gift from an anonymous donor, the CRA Permanent Fund is close to reaching a balance of \$1 million. This endowment-managed fund is designed to help provide necessary funding for restoration and maintenance on priority watersheds into the future. We are approximately \$170,000 short of that million-dollar

milestone and have set our sights on reaching for that goal with a dedicated campaign. Please help build this fund that will support work for generations with a special contribution. Designating your donation of cash, securities, property, and estate gifts for the Permanent Fund ensures the hard work and progress to protect our rivers will continue for many years. Please call Matt Thomas, CRA Development Coordinator, at 231-946-6817, to discuss how you can make a lasting impact.



What an Opportunity!

If you are reading this newsletter, you recently received a request to help support CRA and our work. This year we sent out a real nice little color spread reminding everyone about our focus, passion, and promise to keep working hard to protect northern Michigan's great natural features. We engage thousands of individuals and businesses each year through real work projects, supporting local committees and groups, special events, and mobilizing contributions to make a difference. CRA's funding comes from many diverse sources and in all sizes and shapes. The most important piece of our financial puzzle truly comes from everyone that jumps on board with a membership contribution, annual gift, planned or estate gift. All of these gifts come with a person, family, or business attached. Good folks that are dedicated to this beautiful area.

So, if you have already responded with a donation, thank you so much. If you haven't gotten around to it yet, remember it's never too late! You can return the form in this newsletter, call us with your gift information, or submit your contribution online at www.rivercare.org. We are again offering a wonderful new and original Richard Forrest artwork T-shirt with every membership contribution. Your help makes a big difference!

Yes! I Want to Support CRA & Practical Conservation!

Enclosed is my CRA Membership contribution:

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Thank You For Your Support!

Big Sable Inventory Updated

After many years of dedicated work to reduce erosion in the Big Sable River, it was time for a new inventory of eroding stream banks to help guide the way to new projects. With grants from Pine River Trout Unlimited, Michigan Fly Fishing Club, and the Fin and Feather Club of Mason County, the Big Sable Watershed Restoration Committee was able to complete the new inventory. Starting in Lake County, the upper part of the watershed, a total of 49 sites were identified ranging from minor to severe erosion.

Late this summer another grant was awarded for funding through the Michigan Coastal Management Program (MCMP) to include 5 new rivers with updated/existing inventories to an exciting GIS Database and can be viewed at: www.liaa.info/crabmp/. Rivers included in this project are: Big Sable, Bear Creek, Manistee, Pere Marquette, and Carp Rivers, and ultimately will include all rivers CRA and partners work with.



Floating Down the Manistee

This past July, CRA Board and staff members organized a fun day canoeing the Manistee River below Baxter Bridge. It was a great opportunity to see our work and enjoy our beautiful natural resources!

Welcome Mike!

CRA recently welcomed Mike Donahue to the Board of Directors. Mike is a Vice President with URS Corporation and is the Technical Coordinator for the Boardman Dams Committee Fate of the Dams study. He holds appointments on a number of national and international advisory and policy boards and has been actively engaged in teaching, research and consulting on water resource and environmental topics at the University of Michigan and Michigan State University.





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Twisted Fish Gallery

FRESH ART - FINE FLOWERS

Stewardship Spotlight

Twisted Fish Gallery - Fresh Art, Fine Flowers, Great People!

Bob and Charlotte Streit are living, and working, their dream. After enjoying their resort home and northern Michigan vacations visiting many transplanted relatives for 20 years, the couple decided to create a very special place in Elk Rapids. Moving from St. Louis, Missouri after Bob's retirement, this energetic couple had not planned a life of endless days sailing on East Bay, golfing, or relaxed travel. Instead, they bought property, completed extensive renovations, filled it with beautiful art and flowers, and nurtured stunning gardens to surround it. The Twisted Fish Gallery was born. Featuring some of the finest artists in northern Michigan as well as diverse works from artists across the county, the Twisted Fish has become a destination to enjoy and acquire unique artwork and creative fresh flower bouquets and arrangements. The Gallery's outside sculptures are displayed throughout an inviting 3-acre lawn and garden.

The importance and beauty of the natural world is reflected in much of the art and flowers displayed at the gallery. It is also an understanding that Bob and Charlotte embrace in other ways. You'll find them hard at work in the woods of their Manistee River cabin property each winter, transforming thousands of gallons of maple sap into delicious syrup for family and friends to enjoy all year. This love of northern Michigan's bounty is also expressed through their generous support of CRA's work and mission. We appreciate Bob and Charlotte's dedication and gifts that help keep our region spectacular! Please visit the Twisted Fish at 10443 S. Bayshore Drive in Elk Rapids and check out their website: www.twistedfishart.com.