

February 2011

# Montana Association of Dam and Canal Systems

# MADCS

Issue 8

## Inside this issue

Recap 2010 Workshop .... 1

St. Mary Rehabilitation Project ..... 2

Do You Use Pesticides to Control Aquatic Vegetation On or Near Dams and Canals? ..... 3

Rehabilitation of the Ruby Dam Spillway ..... 4

FERC Looks to Ease Development of Small Hydropower Projects ..... 5

Failure of Corrugated Metal Pipes in Montana ..... 5

## MADCS Officers

### President

Larry Draper  
Fred Burr WUA  
(406) 961-1490  
[madcs1@gmail.com](mailto:madcs1@gmail.com)

### Vice President

Lezlie Kinne  
Willow Creek WUA  
(406) 581-1787  
[h2omt@hotmail.com](mailto:h2omt@hotmail.com)

### Treasurer

Vernon Stokes  
Pondera Canal & Reservoir Company  
(406) 279-3315  
[pccrc@tetonwireless.net](mailto:pccrc@tetonwireless.net)

### Secretary

Vicki Baker  
Teton Cooperative Reservoir Company  
(406) 469-2298  
[mvbaker@3rivers.net](mailto:mvbaker@3rivers.net)

## Recap of 2010 MADCS Workshop

Another Great Success! We had 129 attendees to our most recent workshop held in Billings on October 7-8, 2010. Thanks to everyone who put in time and effort and thanks to attendees for your patience with the noisy hotel (we learned a few lessons there). Special thanks to the US Bureau of Reclamation for a tour of the Yellowtail dams; to Dowl HKM Engineering for the tour of recent lining project on the Bighorn Canal; and to Roger Perkins for the tour of the new trash screen structure on the Two Leggins Canal.

We have posted copies of the presentations on the MADCS website [www.MADCS.org](http://www.MADCS.org)

- Response to Dam Emergencies
- Deadman’s Basin Dam Rehabilitation
- Seepage and Drain
- Wilderness Dam Rehabilitation
- Recent Irrigation Infrastructure Improvement
- Dam Operation Manual
- Vegetation Control
- Joints in Concrete Construction
- GIS and Web Technologies for Irrigation District Operations
- Watershed Improvement Projects
- Do’s and Don’t’s of Canal Lining
- Water Measurement Devices
- The Perfectly Tuned Canal
- Special Session for Engineers on Rip Rap Design for High Velocity Flows



Yellowtail Dam



Visit to Big Horn Canal to view recent canal lining project



### Save the Date!

Next year’s MADCS Workshop will be held in Missoula Montana on Oct. 5-6, 2011. Request for abstracts/papers will be sent out in February.

→  
You decide on the caption...  
“After a rough bus ride”?  
“Mermaid in the water”?  
Other ideas? Email [MADCS1@gmail.com](mailto:MADCS1@gmail.com)

## St. Mary Rehabilitation Project Glacier County, Montana

*Preserving the "Lifeline of the Hi-Line"*

A century ago, local and national leaders developed a vision to build an economy along the Hi-Line of north-central Montana.



The U.S. Congress in 1903 authorized construction of the Milk River Project (Project) to provide a stable source of water for irrigation of the lower Milk River Valley. Two years later, Congress approved construction of the St. Mary Diversion and Conveyance Works to provide supplemental water for the Project. The system would divert water from the St. Mary River to the North Fork of the Milk River, supplementing the Milk River Project approximately 260 miles downstream.

In the years that followed, the St. Mary Diversion and Conveyance Works became the backbone of large-scale irrigated agriculture in Montana's Milk River Basin, enabling irrigation on 140,000 acres of private and tribal lands. In an average year, the system provides about 70% of the water diverted from the Milk River for agricultural and municipal uses. In dry years, the diverted water may account for up to 90 % of the Milk River flows past the city of Havre, Mont.

The system also provides water for communities and industry, Bowdoin National Wildlife Refuge, and recreational opportunities for fishing and hunting along 650 miles of river and at two major reservoirs. It is also integral to settlement of federal reserved water rights with the Blackfeet Tribe and the Ft. Belknap Indian Community in Montana.



*St. Mary diversion dam and bridge*

But today, this marvel of ingenuity and engineering is on the verge of collapse. After more than 93 years of service, many components of the system, including the canal, siphons and drop structures, have exceeded their 50-year design life and are in critical need of repair or replacement. Engineering investigations, an increase in the frequency and cost of maintenance, and delivery interruptions have become common. There is no question the system will fail – the only question is when.

Loss of the St. Mary Diversion and Conveyance Works will economically devastate communities and businesses along the Hi-Line, and likely have economic repercussions across the state. In response, Montana's state government, the Blackfeet Tribe, Milk River Basin water users and Montana's Congressional Delegation have joined together to pursue federal authorization and funding needed to rehabilitate this critical infrastructure. The Water Resources Development Act of 2007 authorized the U.S. Army Corps of Engineers, in consultation with the U.S. Bureau of Reclamation, to rehabilitate and construct the St. Mary Diversion and Conveyance Works. The total authorized project cost is \$153,000,000 with a 75% federal, 25% non-federal cost share.

Over the last four years, the State of Montana and St. Mary Rehabilitation Working Group have raised substantial non-federal funds to initiate the



rehabilitation effort. Since 2004, the State has spent over \$2.7 million on professional engineering services, and project management, and outreach in support of the project. The 2005 State Legislature recognized the importance of this project to Montana by approving \$10 million in bonding authority to serve as seed money for the non-federal cost share.

Milk River Basin residents have contributed over \$500,000 in cash and in-kind services to support the efforts of the St. Mary Rehabilitation Working Group. The eight Irrigation Districts within the Milk River Project have placed assessments on their lands to support the rehabilitation effort. Counties, communities, recreationists, and private citizens within the Basin have also raised funds. In all, state and local funds committed to date for rehabilitation exceed \$13.5 million. However, the State's and Working Groups efforts will not succeed without a significant contribution from the Federal Government.

You can find more information about the St. Mary's project at the MADCS website.

## Do You Use Pesticides to Control Aquatic Vegetation On or Near Your Dams and Canals?

*If so, a new federally mandated rule could affect you.  
Please read below for more information*

- A federal Court decision in January 2009 determined that pesticides (and herbicides) discharged to water are pollutants, requiring a “discharge permit”. Historically, discharges of pesticides were not believed to be a discharge of a pollutant. The Montana Department of Environmental Quality is required to implement the federal court decision.
- A draft of the new permitting requirements was released by the Montana Department of Environmental Quality in January 2011. A 45 day public comment period was started January 10, 2011. ***New permitting requirements are effective April 9, 2011.***
- If you use pesticides to control weeds and algae or nuisance animals such as zebra mussels in or along irrigation ditches or canals that return to the waters of the state, you could be SUBJECT TO THE NEW REQUIREMENTS. Applications may be single spot treatments of infestations or staged large scale treatments intended to clear several acres of waterway. Treatments may be singular or occur several times per year.
- Pesticide discharge in irrigation return flow and agricultural storm water runoff are EXEMPT.
- The Montana Department of Environmental Quality is developing thresholds to determine when a “Pesticide General Permit” will be required. For weed and algae control, one threshold being considered is 64 acres.
- Permit requirements include an application fee (TBD), development of a discharge management plan, and a variety of record keeping tasks, including submittal of an annual report.

Please go to the Montana Department of Environmental Quality website for more information:

<http://deq.mt.gov/wqinfo/mpdes/pesticides.mcp>

You could also call Christine Weaver at (406) 444-3927.

***LOOK FOR A DRAFT OF NEW PERMITTING REQUIREMENTS AND INSTRUCTIONS ON HOW TO SUBMIT COMMENTS ON THE DRAFT.***



*Does it appear that your vegetation control practices near your dam or canal may require you to get this permit?*

*Please let MADCS know. This information will help the board decide how to proceed during the upcoming public comment period on the new permit (January 2011). We need guidance from you to know whether MADCS should get more involved in this potentially broad reaching set of new regulations.*

*Email your comments to*

[madcs1@gmail.com](mailto:madcs1@gmail.com)

### ***Help Save MADCS Money***

*If you prefer to receive your MADCS newsletter via email, please send a request to [madcs1@gmail.com](mailto:madcs1@gmail.com)*

## Busy Busy Busy! Rehabilitation of the Ruby Dam Spillway is Continuing



More information to come as construction progresses.

Check out the Ruby Dam Rehabilitation 2010 video.

[http://www.dnrc.mt.gov/wrd/water\\_op/dam\\_safety/gallery/ruby\\_dam\\_rehab.wmv](http://www.dnrc.mt.gov/wrd/water_op/dam_safety/gallery/ruby_dam_rehab.wmv)



---

## FERC Looks to Ease Development of Small Hydropower Projects

Earlier this year, the Federal Energy Regulatory Commission (FERC) announced it was making its small hydroelectric licensing program more user-friendly. FERC is offering a series of Web-based tools that will help developers understand the FERC licensing process, help improve coordination with other agencies, and help license applicants complete the process more quickly and efficiently.

The new resources, to be available at [www.ferc.gov](http://www.ferc.gov) in August 2010, came out of discussions at FERC's December 2009 technical conference on small, non-federal hydropower projects. The resources will provide a road map that walks applicants through the process of selecting a project site, determining if a project is jurisdictional, selecting a FERC licensing process, consulting with stakeholders, and preparing a license or exemption application. New tools, such as fill-in-the-blank license and exemption application templates and tips on how to expedite the application process, are intended to make it easier for a potential applicant to apply for a license or exemption.

If you have considered developing a local small hydroelectric resource or are interested in learning more about FERC and small hydroelectricity, please visit the FERC website at:

<http://www.ferc.gov/industries/hydropower/gen-info/licensing/small-low-impact.asp>



*Traditional small hydro facility*



---

## Failure of Corrugated Metal Pipes (CMP) in Montana

Dams all over Montana are failing as their corrugated metal pipes (CMP) that were installed mid century are starting to deteriorate. Most are starting to fail near where the standpipe connects to the conduit. If a CMP pipe problem is caught before the pipe completely fails, it can be fixed much more cost effectively than replacing a failed dam (not to mention the problems from flooding downstream).

The MADCS wants to get information out to dam owners statewide on ways to mitigate CMP problems. Please let us know and if you are aware of any documented CMP failures.



*Recent failure of Petroleum County corrugated metal pipe*

Thanks to our Sustaining Affiliates! Your Support Helps Keep Membership Fees Low!

<p><b>MIKE MADING</b>  <b>2M Company</b>                      Phone: (406) 245-3008  <a href="mailto:mmading@2mco.com">mmading@2mco.com</a></p>	<p><b>LARRY FISCHER</b>  <b>BAFSCO</b>                      Phone: (208) 375-1411  <a href="mailto:bafSCO@mindspring.com">bafSCO@mindspring.com</a></p>	<p><b>LYNN SCHENK</b>  <b>BELZONA ROCKY MOUNTAIN INC</b>                      Phone: (406) 590-0412  <a href="mailto:lynn@belzonarockymountain.com">lynn@belzonarockymountain.com</a></p>
<p><b>JOEL STOKES</b>  <b>BEN TAYLOR INC</b>                      Phone: (406) 279-3365  <a href="mailto:bti2@3rivers.net">bti2@3rivers.net</a></p>	<p><b>JAY THOM</b>  <b>DOWL HKM</b>                      Phone: (406) 656-6399  <a href="mailto:jthom@dowlhkm.com">jthom@dowlhkm.com</a></p>	<p><b>JIM BUTLER</b>  <b>DYNOTEK</b>                      Phone: (303) 947-4202  <a href="mailto:dynotekjb@cs.com">dynotekjb@cs.com</a></p>
<p><b>JACK HAYNES</b>  <b>EDC CANAL LININGS LLC</b>                      Phone: (208) 841-0344  <a href="mailto:jahaynes@cableone.net">jahaynes@cableone.net</a></p>	<p><b>RUSTY MERRITT</b>  <b>GEO-SPATIAL SOLUTIONS INC</b>                      Phone: (541) 330-0371 x1  <a href="mailto:rusty@geospatialolutions.com">rusty@geospatialolutions.com</a></p>	<p><b>ANDY FITZHUGH</b>  <b>GODWIN PUMPS</b>                      Phone: (406) 495-1335  <a href="mailto:andy.fitzhugh@godwinpumps.com">andy.fitzhugh@godwinpumps.com</a></p>
<p><b>BRIAN FISCHER</b>  <b>HOUSTON ENGINEERING</b>                      Phone: (763) 493-4522  <a href="mailto:bfischer@houstoneng.com">bfischer@houstoneng.com</a></p>	<p><b>FORREST CRONIA</b>  <b>HUESKER</b>                      Phone: (704) 588- 5500  <a href="mailto:fcronia@huesker.com">fcronia@huesker.com</a></p>	<p><b>DEBRA EARL</b>  <b>MONTANA WATERCOURSE</b>                      Phone: (406) 994-1910  <a href="mailto:debra.earl@montana.edu">debra.earl@montana.edu</a></p>
<p><b>MOLLY SKORPIK</b>  <b>Morrison Maierle INC</b>                      Phone: (406) 542-4825  <a href="mailto:mskorpik@m-m.net">mskorpik@m-m.net</a></p>	<p><b>LINDSAY VOLPE</b>  <b>MT DNRC CARDD</b>                      Phone: (406) 444-9766  <a href="mailto:lmvolpe@mt.gov">lmvolpe@mt.gov</a></p>	<p><b>BILL MURPHY</b>  <b>WATERMAN</b>                      Phone: (208) 890-3453  <a href="mailto:bill.murphy@watermanusa.com">bill.murphy@watermanusa.com</a></p>
<p><b>DALE HANSON</b>  <b>WESTERN STATES INSURANCE</b>                      Phone: (406) 363-3543  <a href="mailto:dahanson@wse-insurance.com">dahanson@wse-insurance.com</a></p>	<p><b>SHANE SCOTT</b>  <b>WORTHINGTON PRODUCTS INC</b>                      Phone: (360) 576-4830  <a href="mailto:sscott@tuffboom.com">sscott@tuffboom.com</a></p>	<p><b>SCOTT ASPENLIEDER</b>  <b>WWC ENGINEERING</b>                      Phone: (406) 443-3962  <a href="mailto:saspenlieder@wwcengineering.com">saspenlieder@wwcengineering.com</a></p>