



# Making Waves



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## Acoustic Telemetry Preparations

By Trevor Cyphers



With field season right around the corner, I've been busy at work with FWCO colleagues fabricating gear to deploy and retrieve a network of acoustic telemetry receivers in the Upper Mississippi River. This array of equipment will be used throughout the year to detect the locations and movements of adult Asian carp tagged with acoustic transmitters. The scope of this multi-year project (previously outlined in the February 2014 issue of *Making Waves*) will increase dramatically this summer.

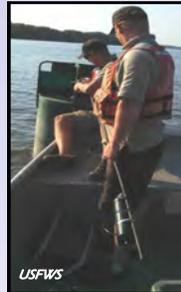
For example, we deployed a total of 14 acoustic receivers in the UMR last summer in the reach between Burlington (upper Pool 19) and Davenport (upper Pool 16), Iowa. These receivers were strictly placed on U.S. Coast Guard navigation buoys within the main channel of the river.



A cache of receivers await deployment.

This year however, we intend to deploy 70 receivers from Burlington, Iowa, to Alma, Wisconsin (upper Pool 5).

Receivers will be deployed in several ways this year to optimize spatial coverage among a variety of aquatic habitats likely to be exploited by Asian carp.



The marker-buoy mount is the most common receiver deployment method and is ideal to track within pool movements of Asian carp along the main channel.

Another means of deployment, focused on pool to pool movements, will be lock chamber mounts. Data collected by these receivers should reveal whether Asian carp utilize lock chambers or other means (e.g., dam gates, spillways) to move past a lock and dam. Receivers will be placed in similar fashion on bridge piers of several tributaries, which may help to identify Asian carp spawning areas.

Finally, bottom mounts will be used and set in strategic backwaters to see when Asian carp are exploiting this habitat.



Receivers deployed in backwaters are mounted to a rebar tetra-pod that is anchored in place.

With the collaboration of the Missouri Department of Conservation and the Minnesota Department of Natural Resources (who are also deploying receivers), acoustic signals transmitted by tagged Asian carp will be monitored, during the ice-free portion of the year, in a nearly 970-mile reach of the UMR in portions of five states.

Data collected during this partnership project will be used to better understand the seasonal and annual movements of Asian carp in the Upper Mississippi River System. This information can be used to help guide informed management decisions to slow or halt the continued upstream advance of these invasive aquatic species.

*Editor's Note: The acoustic technology described here is fundamentally the same as that used to search for the "black box" of Malaysian Airlines flight 370 in the Indian Ocean.*

### What's Inside?



Dam Removal Page 2



Spring Cleaning Page 3



History Lessons Page 3



Others Say ... Page 4



Volunteer Opps Page 5



Local/Regional Turn-In Sites Page 6-7



# A Chilling Dam Removal

By Louise Mauldin



Rockford Dam, located on the Shell Rock River, has long posed public safety concerns in Rockford, Iowa. The former mill house on the east bank of the dam is now a residence.

One of Iowa's oldest dams was removed this winter in the northern part of the state on the Shell Rock River at Rockford. Originally constructed in 1873 to power a flour mill, the former dam no longer met state dam safety standards and was declared to be in a state of failure by the Iowa Department of Natural Resources (DNR) Dam Safety Division in 2011. Public safety concerns by the Floyd County Conservation Board (CCB) escalated over the past two years because of the increased volume of water piping through and underneath the concrete structure. The U.S. Fish and Wildlife Service, Floyd CCB, Iowa DNR, and Barr Engineering diligently worked together in 2013 to obtain permits, satisfy compliance issues, and address geotechnical challenges with the intent of having the dam removed before river levels rose in early spring 2014.



Rockford Dam was breached January 29th, 2014. Beemer Companies from southern Minnesota took on Mother Nature's below zero temperatures and icy river conditions

to remove the dam. By February 17th, no visible signs remained of the 170-ft wide, 8-ft high dam or its original timber-frame structure that was encased in concrete for decades. The Shell Rock River was back to its free-flowing state through the town of Rockford, marking the end of the historic mill dam era. Only the mill house remains on the east side



White heelsplitter mussels were collected from the Shellrock River during an August 2012 survey downstream of the Rockford Dam.

of the river to indicate that a dam may have been present at one time. Placed on the National Register of Historic Places in the 1980s, the mill house is now a private residence and has been remodeled to blend in with the current-day community décor.

had an adverse impact on the presence and distribution of 12 native mussel species in the river reach. A mussel survey conducted in 2012 suggested that the mussel community in this river reach was discontinuous. Two species were collected below the dam but not above and four species were collected above the dam but not below.

Removal of Rockford Dam reconnected 60 miles of the Shell Rock River and the lower Winnebago River, a major tributary that confluences with the Shell Rock River downstream of Rockford. Natural river flows are expected to be restored throughout the river reach. Meanwhile the distribution, abundance, and diversity of fish and mussels, including three state-listed threatened mussel species (creeper, cylindrical papershell, and ellipse) are expected to increase.



Contractors use heavy equipment to demolish concrete at the dam this winter.

As much as the Rockford Dam was a public safety and liability hazard, it was also a barrier to fish passage. Only passable during high flows, the structure impeded upstream and downstream movement of 39 species of fish. Thirteen of the thirty-nine species collected in a 2012 Iowa DNR survey were not collected in the reach upstream of the dam. Smallmouth bass, rock bass, golden redhorse, and four of six darter species were among those absent in the upstream collections. Rockford Dam also



Fish and mussel populations are isolated and aquatic habitats are fragmented when no water flows over Rockford Dam.



View of the former Rockford Dam site where the east bank abutment remains and is now protected with rock riprap to maintain the stability of the mill house foundation.

Removal of the dam eliminates the public safety and liability hazards associated with the risk of structural failure and drowning and allows for safe passage of canoeists, kayakers, and other small watercraft navigating through the river segment. It is also anticipated that fishing for walleye, channel catfish, smallmouth bass, and rock bass will improve in the area.

The west stream bank at the project site will be re-sloped and seeded with grass later this spring. AmeriCorps personnel will assist the Floyd CCB in planting trees, shrubs, and prairie plants in the adjacent upland area owned by the county conservation board and the city of Rockford. When landscaping is finished local residents will enjoy a green park area with a natural viewscape and safer access to the river.



# Give Your Medicine Cabinet A Spring Cleaning

By Mark Steingraeber



On April 26, the U.S. Drug Enforcement Administration (DEA) will coordinate a collaborative effort with participating state and local law enforcement agencies nationwide to safely remove potentially dangerous pharmaceutical controlled substances and other medications from our nation's medicine cabinets.

This initiative compliments the Service's continuing SMAR<sub>x</sub>T DISPOSAL campaign program, a collaborative effort with the American Pharmacist's Association and the Pharmaceutical Research and Manufacturers of America, to educate consumers how to dispose of unwanted medications in a responsible manner that safeguards lives and protects the environment.

**Turn in your **unneeded** Rx medications**  
**April 26th**  
**Visit [dea.gov](http://dea.gov) for location information**



The U.S. Drug Enforcement Administration's planned nationwide effort to collect unwanted medications for safe disposal on April 26 compliments the Service's collaborative SMAR<sub>x</sub>T DISPOSAL campaign to educate consumers how to dispose of unwanted medications responsibly.

The public is encouraged to take their expired, unused, and unwanted medications to one of the hundreds of sites around the country where they will be collected for destruction, from 10 a.m. until 2 p.m. local time, on Saturday, April 26.

Collection sites located within a 60-mile radius of La Crosse (WI) are listed on page 7. A continuously updated list of collection sites in or near your community can be found on the Internet by visiting [www.deadiversion.usdoj.gov/drug\\_disposal/takeback](http://www.deadiversion.usdoj.gov/drug_disposal/takeback)

More than 1,733 tons of unwanted meds were collected nationwide during seven earlier DEA-sponsored disposal events, protecting both human and environmental safety. **YOU CAN MAKE A DIFFERENCE!** 



## Lessons from History

By Mark Steingraeber



Besides biology, a discipline I've made a career of, history was another of my favorite subjects in school ... particularly U.S. History. Therefore, I was pleased to be able to blend the two topics when I spoke to Environmental Science students at Aquinas High School in La Crosse on



March 11. Juniors and seniors in the class had recently turned their attention to water resources and I was invited to speak on water quality issues.

Looking no more than 12 blocks west of campus for a focal point, I presented a chronologic synopsis that highlighted several local, regional, and national events which, in part, helped shape the water quality and environmental integrity of the Upper Mississippi River from one decade to another over the course of the 20th century.

From stockyards in South St. Paul to packing houses in Chicago ... from Pig's Eye Lake to Lake Pepin ... from the Cuya-



Chicago Historical Society

Rivers often served as open sewers used to convey untreated sewage away from rapidly growing cities at the turn of the 20th century.

hoga River in Ohio to Capitol Hill in D.C. ... be it asphalt jungles or suburban sprawl ... corn and soybeans or livestock ... fertilized lawns or rotting algae ... nutrient transport or sediment deposition ... BODs, PCBs, or POTWs ... the Great Depression or the Great Society ... waters breeding pestilence or lighting on fire ... primary-, secondary-, tertiary-, or pre-treatment ... all of this and more were within the bounds of my 40-minute address.

When the Pig's Eye Wastewater Treatment Plant began operations in St. Paul (MN) in 1938, it was the only wastewater treatment facility along the 2,430-mile length of the Mississippi River and the largest in the world.



Google Earth

I presented these and other surface water topics to the students, in a historical context, with the hope that they would better understand the scale, complexity, and severity of some of the more common water resource challenges our nation has grappled with during the past century and which have had profound, long-lasting influences on local water quality; a mixed environmental legacy of intentions and outcomes, good as well as bad, that we have inherited from past generations.

I'm pleased to report that the attentive students here appeared to soak-in the fluid history of water use and development in the Midwest region like thirsty sponges and they are now better informed to play active roles in the stewardship of this natural resource as adults. After all, those who fail to understand their history are often doomed to repeat it. 



J. Sullivan

# What Others Say ...

## — Public Meetings to be Held on Invasive New Zealand Mudsnail —

*By Scott Caven*

Hi folks,

You're receiving this invitation to upcoming meetings as we thought you would be interested in learning more about New Zealand Mudsnails which were recently confirmed in Black Earth Creek. Please feel free to forward this invitation to any interested parties.



Researchers recently confirmed the presence of New Zealand mudsnails in Black Earth Creek, a popular trout fishing destination. This marks the first time this potentially harmful invasive species has been found in inland Wisconsin. The Wisconsin Department of Natural Resources (DNR) and the River Alliance of Wisconsin are hosting informational meetings. Speakers will share information on the biology and distribution of the snails, as well as their potential impact on Wisconsin trout streams and ways to prevent their spread. It is currently unknown whether the mudsnails are present outside of Black Earth Creek, so department staff will also share plans to monitor other at-risk waterways with the help of volunteers.



One highlight of the meeting will be to share how residents and visitors to the Driftless area can help prevent the mudsnails from moving to surrounding trout streams. Tiny at only 1/8-inch, they are easily transported and harder to kill than many invasive species Wisconsin has dealt with in the past. The DNR and partners have identified several effective methods to remove New Zealand mudsnails from wading equipment.

For more information about these snails, go to <http://dnr.wi.gov/> and search New Zealand Mudsnail.

The date, time, and location of three scheduled informational meetings are listed below. For more information, contact either Jodi Lepsch (715) 838-8385 or Scott Caven (608) 781-6333.



April 12, 2014, 12:00pm  
Trout Unlimited - Driftless Area Restoration Effort Workshop  
Living Waters Bible Camp  
E8932 Reo Avenue  
Westby, WI

April 16, 2014, 7:00pm  
Viterbo University  
Reinhart Center - Room 107  
900 Viterbo Court  
La Crosse, WI

April 22, 2014, 7:00pm  
Gander Mountain – Eau Claire  
6440 Scully Drive  
Eau Claire, WI



Magnified images of New Zealand mud snails. This tiny invasive species was first discovered in the United States in Idaho during the 1980s and was recently found in a popular trout stream in the un-glaciated Driftless area of southwest Wisconsin. Public cooperation is needed to help limit its spread.

*Editor's note: Scott Caven is an aquatic invasive species coordinator for the River Alliance of Wisconsin, a 501(c)3 non-profit organization. Scott serves La Crosse, Trempealeau, and Buffalo counties in preventing, containing, and controlling the spread of aquatic invasive species.*



## U.S. Fish & Wildlife Service Volunteer & FUM



**Let's Make  
Waves!**

# 2014 Service Opportunities



What	Where	Who	When
Pike & Walleye Spawning	Genoa NFH	Genoa NFH	April - May
Fish Health Assessments	Genoa NFH	LaX FHC	April - May
Mussel Propagation	Genoa NFH	Genoa NFH	April
River Clean -Up Day	Miss. River-Pool 8	LaX FWCO	May 10
VA Pond Clean-Up	Tomah VA Hospital	LaX FWCO	May 12
Friends Youth Fishing Day	Genoa NFH	Genoa NFH	May 17
River Education Days	Trempealeau NWR	LaX FWCO	May 20-21
Veterans Fishing Day	Tomah VA Hospital	LaX FWCO	May 21
Youth Outdoor Fest	Pettibone Park	LaX FWCO	July 12
River Adventure Day	Miss. River-Pool 9	LaX FWCO	July 15
Trout Fest	Coon Valley	LaX FWCO	July 26
Mussel Surveys	Rivers in WI & IA	Genoa NFH	July - August
Sturgeon Tagging	Genoa NFH	LaX FWCO	August
Winged Mapleleaf Survey	St Croix River (MN/WI)	Genoa NFH	September
Wild Fish Health Surveys	Mississippi River	LaX FHC	July - August
Electrofishing Surveys	Mississippi River	LaX FWCO	April - November
Data Entry	Onalaska	LaX FWCO	Year Round
Maintenance	Onalaska / Genoa	FWCO / NFH	Year Round



### U.S. Fish and Wildlife Service Fishery Program Offices

Genoa National Fish Hatchery  
55689 State Road 35  
Genoa, WI 54632  
(608) 689-2605

La Crosse Fish Health Ctr  
555 Lester Avenue  
Onalaska, WI 54650  
(608) 783-8418

La Crosse Fish & Wild. Cons. Office  
555 Lester Avenue  
Onalaska, WI 54650  
(608) 783-8417

Friends of the Upper Mississippi

555 Lester Avenue  
Onalaska, WI 54650  
608-783-8417  
<http://fumfs.org>



# Medication Drop Off

**Saturday, April 26th, 2014**

**10:00AM—2:00PM**

**\*\*\* 5 Drop Off Locations \*\*\***

**Drop-off  
Sponsored by:**



**1 Onalaska Police Department  
415 Main Street, Onalaska**

**2 Viterbo Fine Arts  
Parking Lot**

**929 Jackson Street, La Crosse**

**3 CESA #4  
923 E. Garland St., West Salem**

**4 Holmen Village Hall  
421 S. Main St., Holmen**

**YOU CAN BRING (SITES 1-4):**

- Prescription Medications
- Over-the-Counter Medications
- Tablets
- Capsules
- Liquids
- Creams
- Ointments
- Aerosols
- Inhalers
- Patches

**5 La Crosse County HHM  
6500 State Road 16, La Crosse**

**YOU CAN BRING (SITE 5):**

- Prescription Medications
- Over-the-Counter Medications
- Tablets
- Capsules
- Liquids
- Creams
- Ointments
- Aerosols
- Inhalers
- Patches
- Needles/Sharps
- Mercury Thermometers
- Fluorescent lamps and electronics
- Household Wastes (Paint, Pesticides, etc.)
- Business Waste (Call 785-9999 for disposal info)

*Did you know?*

*70% of people, 12 and older, who abuse prescription drugs get them from family or friends.*

*Don't let that be you!*

**Check [www.co.la-crosse.wi.us/solidwaste/HHM/](http://www.co.la-crosse.wi.us/solidwaste/HHM/) or call 785-9999 for more information and future drop off dates.**

# Got Drugs?

Turn in your unused or expired medication for safe disposal

**Saturday, April 26th**

Visit [www.dea.gov](http://www.dea.gov) or call 800-882-9539  
for a collection site near you



COLLECTION SITE	ADDRESS	CITY
VITERBO UNIVERSITY - FINE ARTS CENTER	929 JACKSON ST	LA CROSSE, WI
COON VALLEY POLICE DEPT	205 ANDERSON ST	COON VALLEY, WI
CESA 4	923 E GARLAND ST	WEST SALEM, WI
ONALASKA CITY HALL	415 MAIN ST	ONALASKA, WI
GENOA FIRE DEPT	126 MAIN ST	GENOA, WI
HOLMEN MUNICIPAL BLDG	421 S MAIN ST	HOLMEN, WI
SCENIC BLUFFS HEALTH CLINIC	238 FRONT ST	CASHTON, WI
WESTBY POLICE DEPT	205 MELBY ST	WESTBY, WI
GALESVILLE PHARMACY	16812 S MAIN ST	GALESVILLE, WI
VIROQUA POLICE DEPT	702 EAST BROADWAY	VIROQUA, WI
SCENIC BLUFFS HEALTH CLINIC	200 NORTH ST	NORWALK, WI
SPARTA POLICE DEPT	121 E OAK ST	SPARTA, WI
CITY HALL	122 S URBERG AVE	BLAIR, WI
RUSHFORD POLICE DEPARTMENT	405 ELM STREET SOUTH	RUSHFORD, MN
ONTARIO POLICE DEPT	313 MAIN ST	ONTARIO, WI
TREMPEALEAU COUNTY SHERIFF'S OFFICE	36245 MAIN ST	WHITEHALL, WI
READSTOWN POLICE DEPT	116 NORTH 4TH ST	READSTOWN, WI
JACKSON COUNTY RECYCLING	115 HARRISON ST	BLACK RIVER FALLS, WI
WAUKON FIRE DEPARTMENT (NEIDTF)	11 1ST AVENUE NE	WAUKON, IA
TOMAH POLICE DEPARTMENT	805 SUPERIOR AVE	TOMAH, WI
MONONA POLICE DEPARTMENT (NEIDTF )	104 E. CENTER ST.	MONONA, IA
LANESBORO COMMUNITY CENTER	202 PARKWAY SOUTH	LANESBORO, MN
HILLSBORO POLICE DEPT	836 PRAIRIE AVE	HILLSBORO, WI
CHATFIELD POLICE DEPARTMENT	21 2ND STREET SE	CHATFIELD, MN
WALMART SUPER CENTER (NEIDTF)	1798 OLD STAGE ROAD	DECORAH, IA
CITY HALL (NEIDTF)	147 N. LAWLER STREET	POSTVILLE, IA
BOSCOBEL PHARMACY	1028 WISCONSIN AVE	BOSCOBEL, WI
BLUE RIVER VILLAGE HALL	201 CLINTON ST	BLUE RIVER, WI
FILLMORE COUNTY SHERIFF'S OFFICE	901 HOUSTON STREET NW	PRESTON, MN
HARMONY CITY HALL	225 3RD AVENUE SW	HARMONY, MN
RICHLAND CENTER POLICE DEPT	470 MAIN ST	RICHLAND CENTER, WI