

# Wetlands Working Group

## The Wildlife Society

Newsletter, Volume 5, Issue 1  
July 2015

### In This Issue....

**Student Award** - \$250 to cover early registration at the 2015 TWS conference

**WWG Logo Contest** - Win \$100

**WWG Officer Elections**  
Call for nominations

**Wetlands at the TWS Annual Conference**

**WWG Annual Meeting**  
October 19th, 2015

**Feature Article**  
*Neonicotinoids: an Emerging Threat to Wetland Invertebrates?*

**Wetlands in the News**



## It's Time to Update Our Image!

- Are you artistic and creative?
- Do you like to draw and doodle?
- Does the possibility of winning \$100 get your creative juices flowing?
- Would you like to see your artwork as the logo for a national group dedicated to promoting wetland education and outreach?
- If you answered yes to these questions . . . . . keep reading!



### Goal of the Logo Design Contest:

The WWG is seeking original artwork designs for a new logo. The goal of the new WWG logo is to provide an easily recognizable visual image of the WWG. This image should reflect the general mission of the TWS WWG, depict the uniqueness of wetland ecosystems and create interest in our organization.

**The Winning Logo/Design:** The selected winner will receive a cash prize of \$100, will be acknowledged on the WWG website and will be recognized at the WWG meeting at the Annual TWS conference in October 2015.

**Use of the Winning Logo\*:** The new WWG logo may be used on the WWG website, in written communications and announcements, newsletters, posters, WWG merchandise and much, much, more!

**See page 6 for WWG Logo Design Contest Rules, Submission Information, and Terms & Conditions.**

---

## STUDENT AWARD

In order to increase student awareness and participation in the WWG, our group will fund early registration conference fees for one student member of the WWG to attend the 2015 TWS meeting. Students interested in being considered for this award should email a CV and a brief cover letter discussing their interest in wetland research and conservation to Adonia Henry at adoniarhenry@gmail.com, by July 31st 2015. Students will be notified if they are selected for this award by August 14th and will be reimbursed registration costs (\$250) at the annual WWG meeting in Winnipeg. Attendance at the WWG annual meeting is required to receive registration reimbursement.

---

# Neonicotinoids: an Emerging Threat to Wetland Invertebrates?

By Travis Schepker, MS graduate student, University of Missouri

Numerous links have been documented between wetland invertebrate communities and anthropogenic alterations on upland landscape. In the Rainwater Basin of Nebraska over 70% of the landscape has been converted from mixed prairie grassland to cropped maize, soybean, and other agricultural management regimes, which corresponds to approximately 70% of region's remaining wetlands with the potential to receive agricultural runoff. Runoff that negatively impacts aquatic invertebrate communities can include phosphorous and nitrogen which can increase nutrient loading, sedimentation which stunts invertebrate reproduction by smothering eggs, and synthetic pesticides. Synthetic pesticides have been an integral component of modern agricultural practices since the 1940's and recently neonicotinoid insecticides have emerged as one of the



most commonly employed class of agricultural pesticides worldwide. The rapid success of this class of pesticide has been attributed to the relatively low risk to non-target organisms such as mammals, birds, and fish, and versatility in application. Neonicotinoids are systemic insecticides that translocate an active ingredient throughout a growing plant and act on the nervous system of insects that feed on the plant. The intended targets for

integrated pest management strategies include aphids, and other agricultural pest insects, however recent concerns have developed that suggest neonicotinoid applications might also threaten several non-target invertebrate taxa (Goulson 2013). Trace levels of neonicotinoids are frequently extracted from sediments, ground water, and surface water in watersheds with agricultural cover. Several studies have detected neonicotinoid concentrations exceeding the United States Environmental Protection Agency's (EPA) Aquatic Life Benchmark concentrations for invertebrates within aquatic ecosystems adjacent to agricultural fields (Goulson 2013, Hladik et al. 2014, Main et al. 2014). It is likely

that non-target aquatic invertebrates in aquatic systems are susceptible to neonicotinoid insecticides, however no studies have supported this idea by simultaneously monitoring invertebrate communities and neonicotinoid concentrations in a natural system (Goulson 2013).

High trace concentrations of neonicotinoids in non-targeted habitats (those other than crop fields) may be the result of inefficient chemical absorption rates by crops, and their relatively long half-lives, which can be in excess of 1000 days (Goulson 2013). On average, crops treated with imidacloprid (a type of neonicotinoid) absorb only 5% of the total application, while the other 95% remains in local soils or is absorbed by water and transferred from agricultural lands into adjacent wetlands, streams, or other topographically low-lying ecosystems (Main et al. 2014, Hladik et al. 2014). Prolonged exposure in water to the neonicotinoid imidacloprid was linked to changes in growth, persistence and community composition of aquatic invertebrates, particularly to individuals in the functional group known as shredders, potentially reducing ecosystem functions related to decomposition, nutrient cycling and water quality (Agatz et al. 2014). Additionally neonicotinoids are speculated to have indirect effects on wetland ecosystems through the ability to alter the base of aquatic food webs and reduce availability of important invertebrate prey for wetland dependent taxa. Given the high use of neonicotinoid insecticides in the Rainwater Basin and their inherent characteristics, i.e., acute toxicity to insects, relatively long half-lives in soil, and high water solubility, that result in potentially deleterious effects, either directly or indirectly, to numerous taxa, the University of Missouri is undertaking a research project to evaluate the relationship between neonicotinoid concentrations in wetlands and invertebrate community metrics. Specifically this project will compare neonicotinoid levels in publicly managed wetlands, conservation easement wetlands and agricultural wetlands in the Rainwater Basin of Nebraska and evaluate potential effects on invertebrate biomass, species richness and community composition. For more information on this project, please contact MU graduate student Travis Schepker (tjsrz8@mail.missouri.edu). See next page for literature cited.



“It is likely that non-target aquatic invertebrates are susceptible to neonicotinoid insecticides.”



# Wetlands at the 2015 TWS Annual Conference!

The WWG is working with DU-Canada to organize a symposium at the 2015 TWS conference titled “Wetlands of the Great Plains: Science Supporting Program and Policy Initiatives”. If you plan on attending the 2015 TWS meeting, please check the schedule and stop by the

symposium if you have the opportunity – it looks like it’s shaping up to be a great series of presentations. Information on the WWG Annual Meeting and other opportunities to learn about wetlands at the conference are highlighted below. We hope to see you in Winnipeg!

## Wetlands of the Great Plains: Science Supporting Program and Policy Initiatives

The North American Great Plains is among the most productive and biodiverse ecoregions in the world owing to rich soils and myriad wetlands that characterize this region. Persisting threats (e.g., draining, filling or degradation of margins and basins) and new perturbations (e.g., modified land use policies, new commodities and expanding oil and gas production) to wetlands affect the goods and services provided. In this symposium, the broad goals are to review the status of wetland conservation, highlight emerging threats and opportunities for wetland conservation, and engage in discussions about the biological, social and economic information most urgently needed to support effective management and policy alternatives in the Great Plains of North America. This symposium will feature scientists and policy experts from Ducks Unlimited, State Universities, Federal and State Agencies, and other conservation organizations. The three-part symposium will provide an overview of threats to wetland conservation, outline current wetland restoration and conservation techniques and policies, and include recent examples of wetland valuation and public engagement.

### Register Now for the TWS Annual Conference in Winnipeg

Conference dates:  
October 17-21, 2015

<http://www.twsconference.org/registration-information/>

#### Literature Cited for Neonicotinoids Feature Article:

Agatz, A., R. Ashauer, and C. D. Brown. 2014. Imidacloprid perturbs feeding of *Gammarus pulex* at environmentally-relevant concentrations. *Environmental Toxicology and Chemistry* 33: 648-653.

Goulson, D. 2013. An overview of the environmental risks posed by neonicotinoid insecticides. *Journal of Applied Ecology* 50:977-987.

Hladik, M. L., D. W. Kolpin, and K. M. Kuivila. 2014. Widespread occurrence of neonicotinoid insecticides in streams in a high corn and soybean producing region, USA. *Environmental Pollution* 193: 189-196.

Main, A. R., J. V. Headley, K. M. Peru, N. L. Michel, A. J. Cessna, and C. A. Morrissey. 2014. Widespread use and frequent detection of neonicotinoid insecticides in wetlands of Canada’s Prairie Pothole Region. *PLoS ONE* 9(3): e92821.



<http://prairie.ducks.org>

### WWG Annual Meeting

October 19th

1:00-2:30pm

Kildonan Room of the  
Delta Hotel.

Please consider attending as we will be revealing the winner of the logo design contest, as well as announcing new officers.

**We will be raffling off a ticket for the fieldtrip to Oak Hammock Marsh,**

a 9,000 acre restored wetland just outside of Winnipeg and home of Ducks Unlimited – Canada. Anyone attending the WWG meeting will be entered into the raffle and the drawing will be made at the end of the meeting.



<http://www.gov.mb.ca>  
by Carrol Henderson

### Field Trips to Oak Hammock Marsh

October 20th, 1-5pm

October 21st  
8:30am-12:30pm

Visit <http://www.twsconference.org/fieldtrips/> for more information.

### Wetland Ecology and Restoration Workshop

October 17th, 8am-5pm

Supported by the Wildlife and Habitat Restoration Working Group of TWS

Visit <http://www.twsconference.org/workshops/> for more information.



# Officer Elections: Call for Nominations

Want to join a fun team to advance the mission  
of the Wetlands Working Group?

The Wetlands Working Group of the Wildlife Society is seeking nominations for open positions of Vice Chair, and Secretary/Treasurer. Our bylaws indicate we need at least 2 people to run for each position so please consider nominating yourself or someone else. The duties are outlined in the WWG Charter, and are summarized as follows:

**VICE CHAIR** — The Chair-elect shall serve as the Vice-Chair and assume the duties of the Chair in the absence of the Chair or upon the inability of the Chair to serve, and shall perform any duties assigned by the Chair. The Chair-elect shall chair the Newsletter Committee (Article VII, Section 2, Clause D). In the event the Chair-elect cannot serve in the Chair's absence, the Executive Board shall appoint a Chair, pro tempore. Upon completion of a full term as Chair-elect, the Chair-elect succeeds to the position of Chair. The Vice Chair shall share promotion and marketing responsibilities (e.g., newsletters) with the Secretary/Treasurer.

**SECRETARY/TREASURER** — The Secretary/Treasurer shall be responsible for maintaining the files, records, and funds of the Working Group. Duties shall include recording the minutes of all membership and Executive Board meetings; issuing copies of the minutes to the Executive Board, members, and Society; the receipt and disbursement of funds; preparing and submitting an annual fiscal-year report to the Executive Board, members, and Society; and preparing an annual budget for approval by the Executive Board. The Secretary/Treasurer shall share promotion and marketing responsibilities (e.g., newsletters) with the Vice Chair.

**Please submit all nominations, including self-nominations, via email to the Chair of the Nominations Committee, Ben Wishnek, at [ben.wishnek@gmail.com](mailto:ben.wishnek@gmail.com) by August 14, 2015.**

**Nominations should include name, contact information, and a brief bio.**



*Managed Wetlands at Benton Lake National Wildlife Refuge, photos courtesy of U.S. Fish and Wildlife Service*

## Wetlands in the News

### Waters of the US

Final rule published on June 29, 2015.

TWS recognizes WWG expertise for comments to proposed rule!

### NAWCA Reauthorization

Bipartisan Sportsman Act introduced to the US Senate on February 5, 2015.

### Benton Lake National Wildlife Refuge

Wetland management mimics natural drying and improves habitat for wildlife.

### Tampa Bay Estuary Program

Surpasses seagrass restoration goal.

### Wetlands Play a Vital Role in Flood Protection

Wetlands described as 'kidneys' and 'sponges'!

### New Publication

Geographically isolated wetlands

### Check out the

### WWG Wetland News Website

for more great information and links to original articles for our members to stay abreast of the most recent wetland studies, policies, and legislation.



NOAA

Click on the [light blue](#) hyperlinked text above for links to the original articles.



## “Working Groups are Resource of Technical Expertise” to Conservation Affairs Network

The [Conservation Affairs Network \(CAN\)](#) engages and unifies the efforts of The Wildlife Society, its 200+ units, and nearly 10,000 members to advance wildlife conservation policy issues at the national, regional, and local levels. Launched in 2014, the CAN creates a venue for streamlined communication, collaboration, and cooperation on policy matters important to wildlife professionals.

Recent efforts have connected the WWG and other working groups to the CAN as resources that provide technical expertise regarding particular policies and legislation as they arise. Designated members of each working group also receive the CAN’s bimonthly newsletter to stay on top of relevant issues to better inform their membership.

The [WWG was featured in the CAN June 2015 newsletter](#) for working closely with TWS Staff “to draft comments on the proposed ‘Waters of the United States’ rule. Using the scientific expertise of the working group members, the comments suggest language changes that would better reflect the inter-connected nature of aquatic systems”.



*Bottomland Hardwood Wetland, Cache River, IL, by Adonia Henry*

## Update on S. 1140 The Federal Water Quality Protection Act

In late May, WWG members were alerted to [Senate bill 1140](#), “[The Federal Water Quality Protection Act](#)”. After a [May 19th legislative hearing](#) by the Senate Committee on Environment and Public Works Subcommittee on Fisheries, Water, and Wildlife (FWW), a group of 85 concerned scientists signed onto a letter opposing S. 1140; this letter was sent to Sens. Dan Sullivan (R-AK), the FWW chairman, and Sheldon Whitehouse (D-R.I.), FWW ranking member. In an interview with Bloomberg BNA, Jan Goldman-Carter, senior manager attorney with the National Wildlife Federation’s wetlands and water resources program, stated that “S. 1140 completely rejects both the science and the law with respect to biological integrity”, ignoring the peer-reviewed scientific review and connectivity science that the agencies used to write the Clean Water Act Final Rule defining the “Waters of the United States”.

On June 10th, S.1140 made it out of committee and was recommended to the House as a whole for further consideration. Co-sponsors continue to accrue in support of this bill. The Environmental Protection Agency and Army Corps of Engineers [published their final rule on June 29th](#) which clarifies which water bodies receive protection under the Clean Water Rule after a series of Supreme Court decisions created uncertainty over what water bodies fall under its jurisdiction. The rule will go into effect 60 days after its publication.



*Gulf Coast Wetland, Texas, by Adonia Henry*

## North American Wetlands Conservation Act (NAWCA)

This act enables wildlife professionals to conserve and support robust waterfowl and other wetland wildlife populations across North America by funding projects dedicated to wetlands conservation. Wetland habitat protection, restoration, and enhancement projects have been realized in every U.S. state, every Mexican state, and every Canadian province thanks to NAWCA grants, which require a 1:1 fund match from non-federal sources. Since its inception in 1990, NAWCA has supported 2,400 projects across 27 million acres using \$1.3 billion in grants and \$2.7 billion in matching funds.

While NAWCA continues to receive appropriations, the program’s authorization expired in 2012, putting the act at risk of being discontinued. Current legislation in front of Congress would officially extend the NAWCA program through FY 2020.

**How can you get involved?** Add your voice to fellow TWS members by asking your U.S. Representative to support the reauthorization of NAWCA by co-sponsoring H.R. 2346. Use the [TWS Action Center](#) to contact your Representatives and urge them to support reauthorization of this important program. Let your members of Congress know the importance of this program that conserves wetlands and waterfowl populations.

# WWG Logo Design Contest Rules:

- 1) Art work/designs should fit an 8.5 X 11 page.
- 2) Only original artwork is to be submitted. No copyrighted material is allowed\*.
- 3) There is no limit on the number of entries that can be submitted per individual.
- 4) Design can be in color (please limit to 3 colors) or monochrome.
- 5) Logo should include the group name - Wetlands Working Group
- 6) Logo designs should be submitted electronically to Lisa Webb at [webbli@missouri.edu](mailto:webbli@missouri.edu) in any standard graphics format (e.g., jpg, tif) or PDF file format.
- 7) Please include your name, address, telephone, and email address and put "WWG Logo" in the email subject line.
- 8) Alternatively, hard copies of the design may be mailed to Lisa at: 302 ABNR Building, University of Missouri, Columbia, MO 65211.
- 9) Deadline for submission of artwork: September 20, 2015.
- 10) A hard copy and high resolution digital format (vector format preferred, but not required) of the winning logo must be submitted within two weeks of receipt of notice of award to receive the \$100 prize. If the winning logo is color, please also submit a monochrome version
- 11) For more information on the WWG, go to: <http://drupal.wildlife.org/wetlands/>
- 12) For additional information or questions please email Lisa Webb at [webbli@missouri.edu](mailto:webbli@missouri.edu).

## Questions?

Interested in sharing your wetland experiences and contributing to the Newsletter?

## Contact Us!

**Lisa Webb, Chair**

[webbli@wissouri.edu](mailto:webbli@wissouri.edu)

**Adonia Henry, Vice Chair**

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

**Jennifer Chutz, Treasurer/  
Secretary**

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

**Heath Hagy, Past Chair**

[hhagy@illinois.edu](mailto:hhagy@illinois.edu)



*Montane Wetland, ID, by Adonia Henry*

## \* Logo Design Contest Terms and Conditions

- a) By submitting a logo to this contest, artist acknowledges that the WWG is buying all rights to the winning artwork.
- b) The winning artwork/logo design will become the sole property of the WWG for the exclusive use, reproduction, and distribution as needed by the WWG.
- c) The winner will be required to sign a certificate of authenticity indicating that the artwork/logo design is original and that no part of the artwork/design is copyrighted.
- d) The WWG will return original artwork/designs to the artists (excluding the winning artist) if a self-addressed and stamped envelope is provided.
- e) WWG agrees not to use, reproduce, or distribute logos or designs that were not selected.

## How to Join WWG

When you renew your TWS membership, be sure to sign up for the Wetlands Working Group!

If you're already a member of TWS, you can add membership in the Wetlands Working Group at any time by logging into your account at <http://wildlife.org/>.

Membership dues are only \$5 annually, which helps support activities at meetings and outreach events.