

# The Great Lakes Marsh Monitoring Program

## THE MARSH MONITOR

### 25 years!

We are proud to report the Great Lakes Marsh Monitoring Program (GLMMP) has reached its 25<sup>th</sup> year. We thank you and all of our volunteer participants for making the program an outstanding success. Read on and see how we've been busy putting your hard-earned survey results to good use.

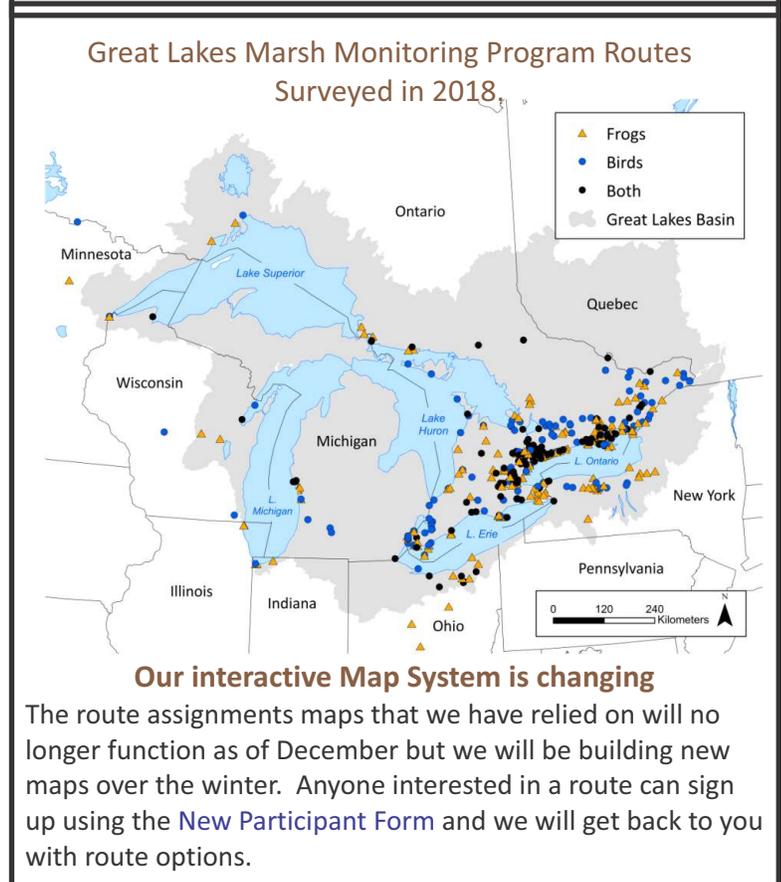
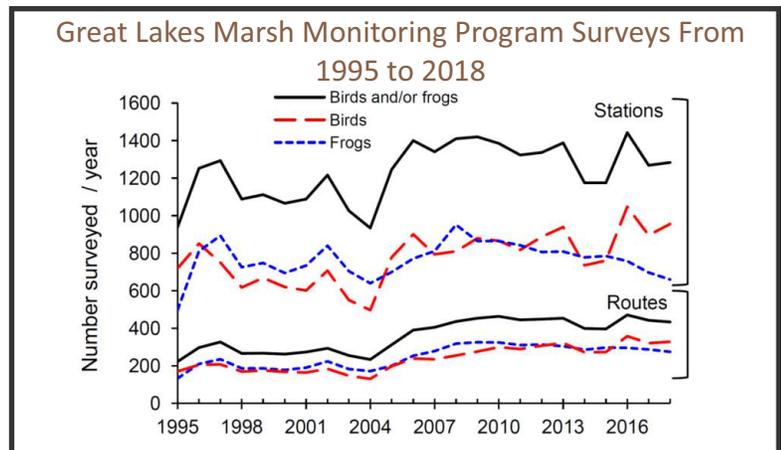
#### How are we doing?

In the 2018 season, we completed bird surveys at 328 routes and 956 stations, and frog surveys at 275 routes and 660 stations. Over 400 volunteers contributed nearly 5000 hours of work. The number of routes and stations surveyed for birds and frogs varies from year to year, but is always in the hundreds (see graph). Using your contributions, it is possible to draw important conclusions on the status and trends of species and help guide conservation actions. Thank you!

#### How are birds and frogs doing?

The latest trends show that populations of 7 of 18 (39%) marsh-associated bird species significantly declined between 1995 and 2018, and 1 of 8 (13%) marsh-associated frog species significantly declined (see page 2). On the up side, 5 of 18 (28%) bird species, including the threatened Least Bittern (hooray!), and 3 of 8 (38%) frog species significantly increased. These trends tell us how species change over many years. To get a sense of year-to-year differences, take a look at the annual abundance indices for birds (see page 3) and occupancy for frogs (see page 4).

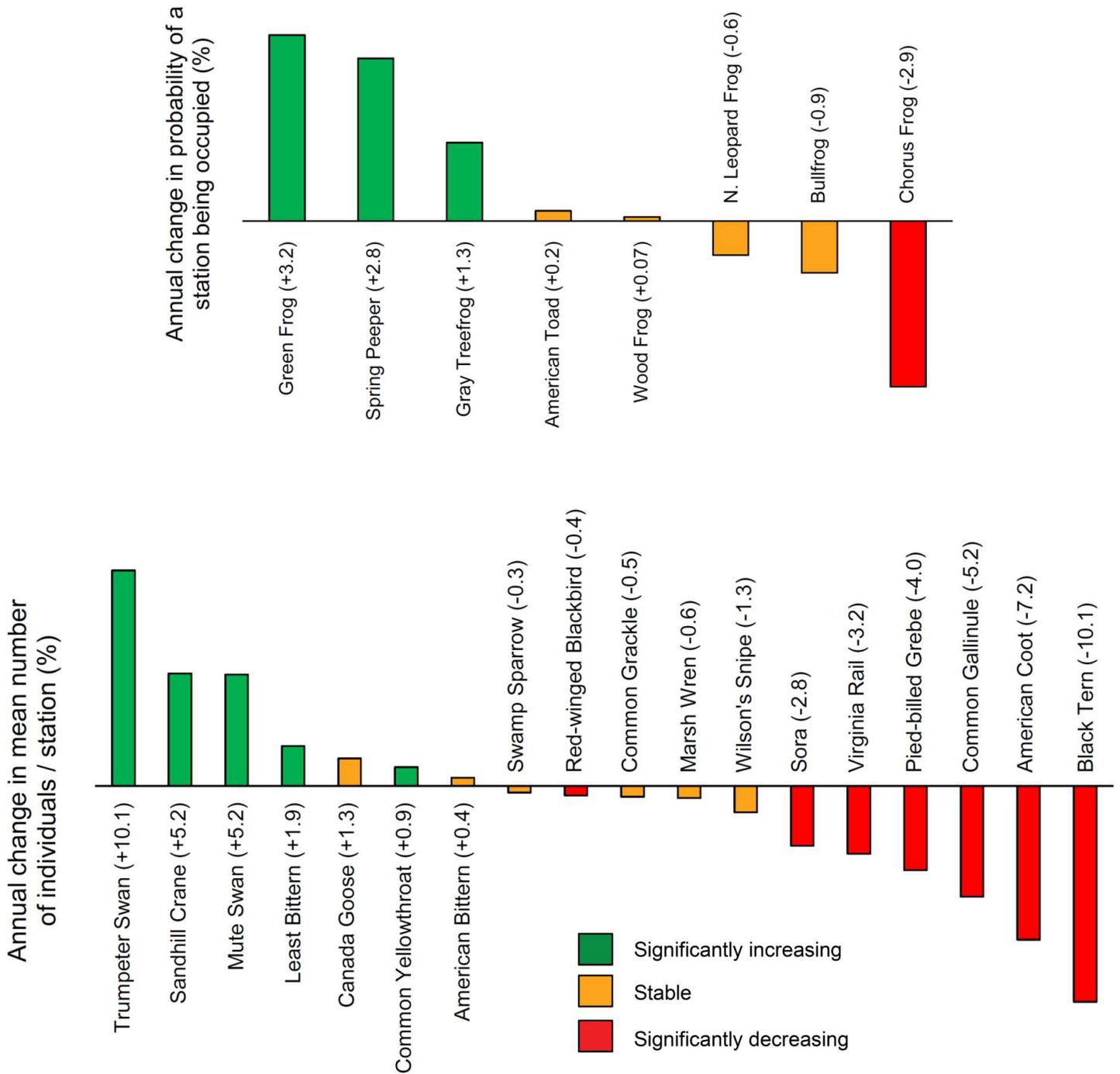
Would you like to be assigned to a Great Lakes Marsh Monitoring Program Route? [Click here](#) and complete the online registration form.



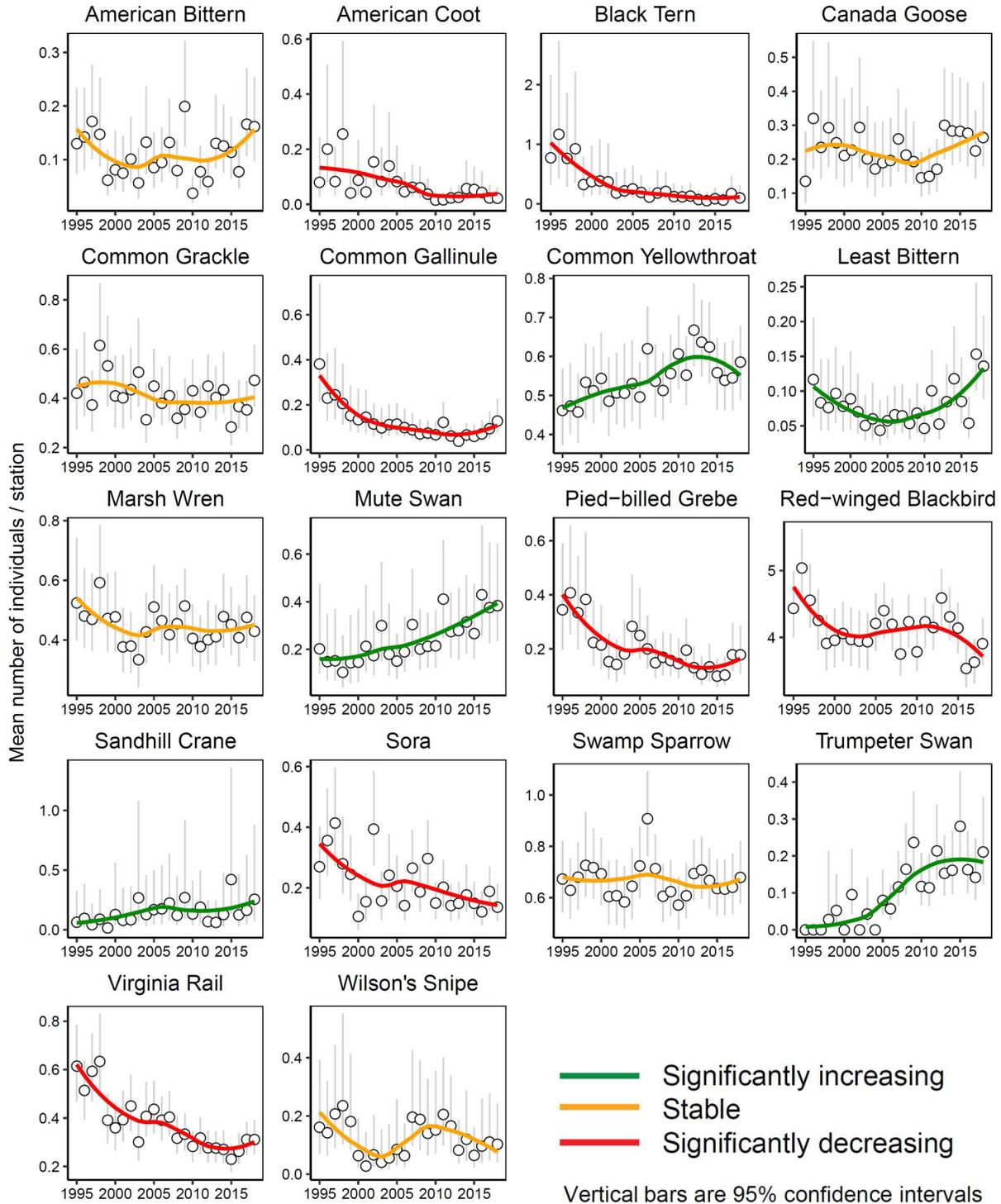
#### Our interactive Map System is changing

The route assignments maps that we have relied on will no longer function as of December but we will be building new maps over the winter. Anyone interested in a route can sign up using the [New Participant Form](#) and we will get back to you with route options.

## Great Lakes Marsh Monitoring Program Trends for Marsh Birds and Frogs 1995 - 2018

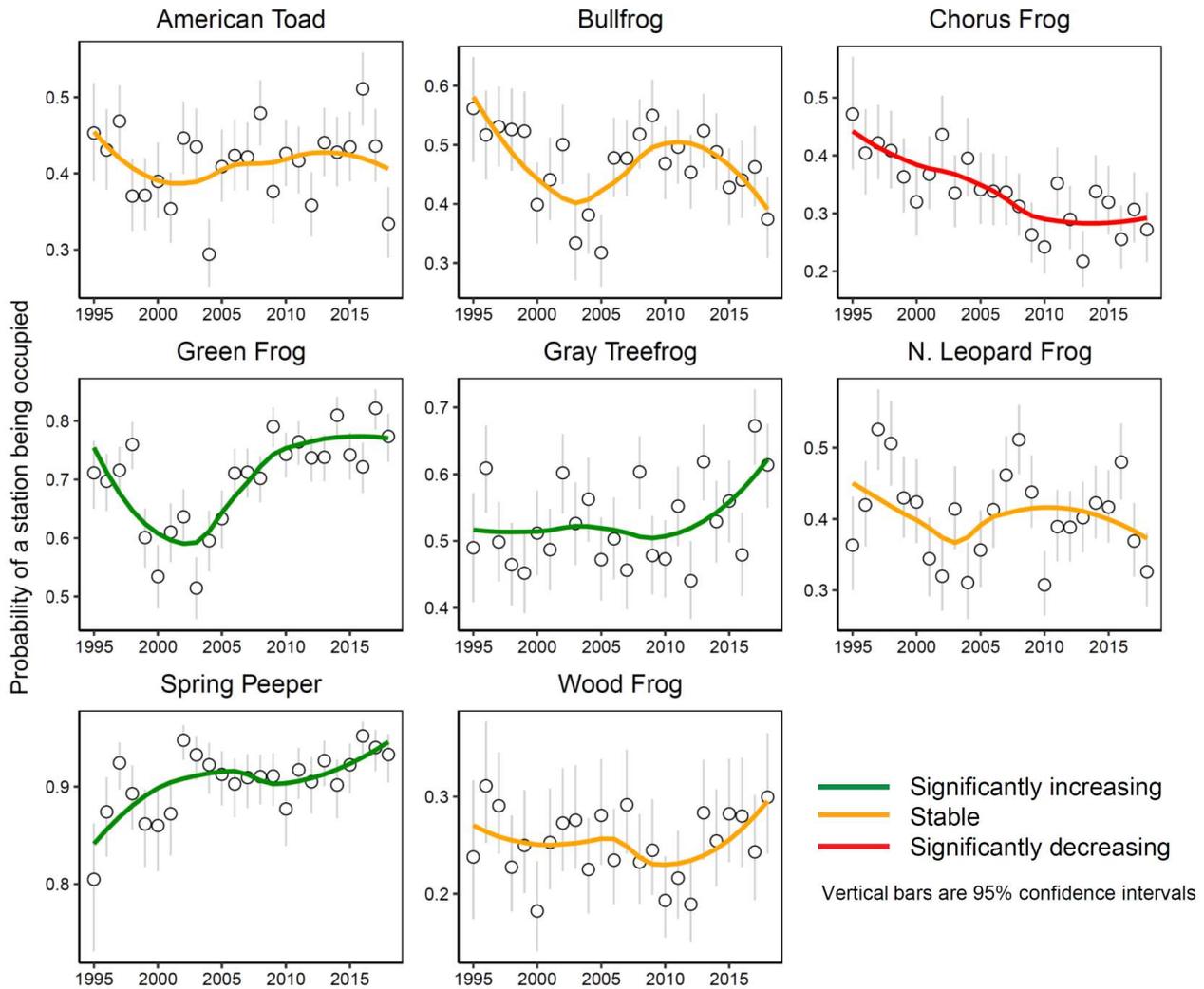


## Great Lakes Marsh Monitoring Program Annual Abundance for Birds





## Great Lakes Marsh Monitoring Program Annual Occupancy for Frogs



Interested in viewing your Raw Data?

You can conduct your own research and request raw data at [birdscanada.org/birdmon](http://birdscanada.org/birdmon) under the "Download" tab. Note that: bird and amphibian data must be requested separately using a login and password.

**NatureCounts Update:** Any changes you make to your profile information will automatically be forwarded to membership/supporter department.

# The Marsh Monitor

## Accomplishments:

With the tremendous effort of volunteer surveyors and financial assistance from supporters (see last page), we have accomplished many important activities and outcomes over the past year. These include reports and presentations, which summarize and draw conclusions from your hard-earned data, as well as media inquiries, requests for raw data, and analysis.

## Presentations:

- **Lake Erie: what do the birds tell us?** Nature Guelph, Guelph, ON; Riverwood Conservancy, Mississauga, ON; Otter Valley Naturalists, Straffordville, ON; Huntsville Nature Club, Huntsville, ON; Bert Miller Nature Club, Fort Erie, ON.
- **Great Lakes Marsh Monitoring Program update.** Inland Waterbird Technical Committee, Environment and Climate Change Canada, Ottawa, ON.
- **The Great Lakes Marsh Monitoring Program: a successful formula for effective conservation.** International Ornithological Congress, Vancouver; Latornell Conservation Symposium, Alliston, ON.
- **Applied Waterbird Conservation.** Western University, London, ON.
- **Multispecies benefits of wetland conservation for marsh birds, frogs, and species at risk.** Research and Conservation Conference, Long Point World Biosphere Reserve Foundation, Simcoe, ON; Eastern Habitat Joint Venture board meeting, Port Rowan, ON.
- **Great Lakes Marsh Monitoring Program: volunteer orientation and training.** Hillman Marsh Conservation Area, Leamington, ON.



Gilles Bisson, Bay of Quinte Ontario



Onorina Maola, Detroit River Ontario

## Data:

We supplied the following partners with information based on your hard-earned data to achieve and advance wetland conservation:

- Audubon Great Lakes to illustrate the status of marsh nesting birds in part of their upcoming website dedicated to conservation of Great Lakes coastal wetlands.
- Environment and Climate Change Canada to assess the health of the nearshore waters of Lake Erie and the coastal wetlands of the Long Point region.



Rudy and Joli Reising, Vermillion River Ohio

# The Marsh Monitor

- US Fish and Wildlife Service, New York State Department of Environmental Conservation, Niagara County Soil and Water Conservation District, and West Michigan Shoreline Development Commission to assess species and habitat recovery in the Niagara River, Eighteenmile Creek, and Muskegon Lake Areas of Concern.
- Royal Botanical Gardens, Raisin Region Conservation Authority, City of Markham, Oak Ridges Moraine Land Trust, Nature Conservancy of Canada, and Ontario Ministry of Natural Resources and Forestry and others to monitor biodiversity.
- US Environmental Protection Agency and Environment and Climate Change Canada to assess status and trends of wetland health in the *State of the Great Lakes 2019* report.
- Various consultants for environmental assessments and students for research projects.

## Media:

### **It's a risky game for wildlife without wetlands.**

Published by *InsideOttawaValley.com* part of Metroland Media Group.

## Analysis:

**10-min point counts.** We show in a **peer-reviewed scientific manuscript** that 10-min point counts are superior to 15-min surveys for marsh bird population monitoring across large areas like the Great Lakes basin. An upcoming switch to 10-min GLMMP bird point counts has now been endorsed by Environment and Climate Change Canada's Inland Waterbird Technical Committee and the Great Lakes Coastal Wetland Monitoring Program. The switch to shorter 10-min point counts will allow more stations to be surveyed, which will result in more powerful analysis to document and explore new conservation solutions for declining marsh bird species. We will be in touch with revised field manuals reflecting this and other changes hopefully in time for the next monitoring season in spring 2020.

## It's a risky game for wildlife without wetlands

Conservation projects give a warm welcome to species at risk

COMMUNITY Nov 01, 2018 by Julie Pollock InsideOttawaValley.com



Hullett Marsh Provincial Wildlife Area, a wetland restored by Ducks Unlimited Canada. - Submitted by Ducks Unlimited Canada

Would you like some additional training but can't find the opportunity?

Check out the Bird Studies Canada YouTube page ([youtube.com/birdstudiescanada](https://www.youtube.com/birdstudiescanada)). Here, you can find the webinars for new volunteers and refresher webinars for more experienced participants.



VOLUME 12, ISSUE 2, ARTICLE 8

Tozer, D. C., C. Myles Falconer, A. M. Bracey, E. E. Gnass Giese, G. J. Niemi, R. W. Howe, T. M. Gehring, and C. J. Norment. 2017. Influence of call broadcast timing within point counts and survey duration on detection probability of marsh breeding birds. *Avian Conservation and Ecology* 12(2):8. <https://doi.org/10.5751/ACE-01063-120208>  
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Research Paper

### **Influence of call broadcast timing within point counts and survey duration on detection probability of marsh breeding birds**

Douglas C. Tozer<sup>1</sup>, C. Myles Falconer<sup>2</sup>, Annie M. Bracey<sup>3</sup>, Erin E. Gnass Giese<sup>3</sup>, Gerald J. Niemi<sup>2,4</sup>, Robert W. Howe<sup>5,5</sup>, Thomas M. Gehring<sup>6</sup> and Christopher J. Norment<sup>1</sup>  
<sup>1</sup>Bird Studies Canada, <sup>2</sup>Natural Resources Research Institute, University of Minnesota Duluth, <sup>3</sup>Cofrin Center for Biodiversity, University of Wisconsin-Green Bay, <sup>4</sup>Department of Biology, University of Minnesota Duluth, <sup>5</sup>Department of Natural and Applied Sciences, University of Wisconsin-Green Bay, <sup>6</sup>Department of Biology and Institute for Great Lakes Research, Central Michigan University, <sup>7</sup>Department of Environmental Science and Ecology, The College at Brockport, State University of New York

**ABSTRACT.** The Standardized North American Marsh Bird Monitoring Protocol recommends point counts consisting of a 5-min passive observation period, meant to be free of broadcast bias, followed by call broadcasts to entice elusive species to reveal their presence. Prior to this protocol, some monitoring programs used point counts with broadcasts during the first 5 min of 10-min counts, and have since used 15-min counts with an initial 5-min passive period (P<sub>1</sub>) followed by 5 min of broadcasts (B) and a second 5-min passive period (P<sub>2</sub>) to ensure consistency across years and programs. Influence of timing of broadcasts within point counts and point count duration, however, have rarely been assessed. Using data from 23,973 broadcast-assisted 15-min point counts conducted throughout the Great Lakes-St. Lawrence region between 2008 and 2016 by Bird Studies Canada's Marsh Monitoring Program and Central Michigan University's Great Lakes Coastal Wetland Monitoring Program, we estimated detection probabilities of individuals for 14 marsh breeding bird species during P<sub>1</sub>B compared to BP<sub>2</sub>, P<sub>1</sub> compared to P<sub>2</sub>, and P<sub>1</sub>B compared to P<sub>2</sub>BP<sub>2</sub>. For six broadcast species and American Bittern (*Botaurus lentiginosus*), we found no significant difference in detection during P<sub>1</sub>B compared to BP<sub>2</sub>, and no significant difference in four of the same seven species during P<sub>1</sub> compared to P<sub>2</sub>. We observed small but significant differences in detection for 7 of 14 species during P<sub>1</sub>B compared to P<sub>2</sub>BP<sub>2</sub>. We conclude that differences in timing of broadcasts causes no bias based on counts from entire 10-minute surveys, although P<sub>1</sub>B should be favored over BP<sub>2</sub> because the same amount of effort in P<sub>1</sub>B avoids broadcast bias in all broadcast species, and 10-min surveys are superior to 15-min surveys because modest gains in detection of some species does not warrant the additional effort. We recommend point counts consisting of 5 min of passive observation followed by broadcasts, consistent with the standardized marsh bird protocol, for surveying marsh breeding birds.



Click here for the 2019 #MMPSurvey Social Media Photo Album!



**Janina** @JaninaH2O · Jun 28  
Volunteer frog monitoring this evening for the Great Lakes #MMPSurvey @BSCOnt Elmira



**borealmama** The Sora is a secretive marsh bird that you will hear before you are lucky enough to see it. Their call is a loud descending whinny - sounds like a crazy bird .



**kory.renaud** Perfect evening for a paddle! #kayak #creek #mmps survey #marshmonitoring #birdstudiescanada @essexregionconservation @wildernesssystems



**eowyn1458** Green heron grabbing a huge dragonfly snack #greatlakesmarshmonitoringproject #mmps survey



A great #MMPSurvey #fieldnote from #NewYork  
Yep, first survey was April 8, maybe should have waited a bit. Leopard frogs were sitting, catatonic, like me before coffee, on the shoulders of the roads. Picked one up and it didn't even flinch.

The woods frogs by the house, i first called on the 6th, called only 3 days, even though we didn't get that cold weather break we usually see. Have never heard them in my stations, downstream in the same drainage  
Best Sandy B

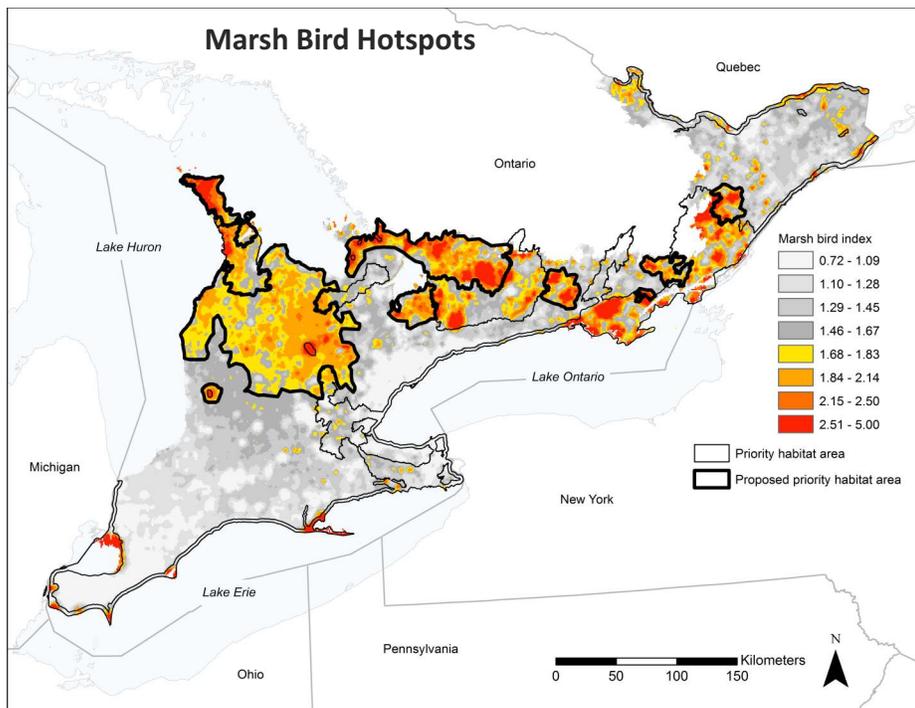
# The Marsh Monitor



**Phragmites control.** We are finding significant increases in focal marsh bird species in wetlands where non-native invasive *Phragmites* or Common Reed has been controlled compared to nearby wetlands with no control. We hope to publish our findings soon in a peer-reviewed scientific paper. The results will fuel further *Phragmites* control efforts, which will increase the amount of high-quality marsh bird habitat across the landscape and stabilize or perhaps even reverse population declines in marsh bird species of conservation concern.

**GLMMP citizen scientists know their stuff.** We already knew that our participants do a great job completing surveys, but to clearly demonstrate this, our latest analysis shows that marsh bird and habitat survey results based on data collected by GLMMP participants are similar to results based on data collected by professionals. This is a huge boost to the reliability of GLMMP citizen science data and will increase its use for conserving declining marsh bird species. **Well done to each and every one of you for doing such a great job at carefully identifying species during surveys and closely following the GLMMP field protocols, which no doubt contributed in a huge way to these welcome results.** We look forward to sharing the details of this study in a future peer-reviewed scientific manuscript and boasting about the high quality and reliability of our dedicated citizen scientists and your datasets.

**Marsh bird hotspots.** We are using bird and habitat data to map priority regions for marsh bird conservation throughout southern Ontario. The results will be used by the Ontario Eastern Habitat Joint Venture to protect and restore wetlands in areas that will benefit the highest number of marsh bird species of conservation concern. The results also help the Joint Venture achieve its wetland conservation goals for all bird species. This is yet another example of your hard-earned GLMMP data being put to good use for wetland conservation.





## Marsh Monitoring Program Regional Coordinators: A Happy Evolution

Each year a core group of dedicated wetland champions work on behalf of Bird Studies Canada as Regional Coordinators for the Marsh Monitoring Program. These individuals enhance wetland conservation in their local area in many ways, such as delivering training sessions, mentoring, teaching wetland knowledge, assigning routes, and sending out social media.

Long term champions Terry Sprague, Bay of Quinte Ontario, and Ray Stewart, Ohio Wetlands, are retiring this fall and John Drake, Grand Calumet River Indiana, retired after the 2018 season. Veteran coordinator from the Oswego area New York, Sandy Bonanno has been slowing down her activities over the last couple of years, but still finds the time to mentor local volunteers.

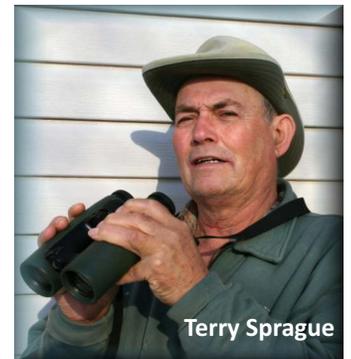


Ray Stewart

The exceptional skills, knowledge, and dedication of these four Regional Coordinators should not be underestimated. They have supported volunteers across three of our biggest regions and, between the three of them, their long-term involvement totals 41 years of supporting wetland conservation in the Great Lakes basin. We wish Terry, Ray, John, and Sandra the very best with their future endeavors.

We would like to give a big thank you as well to our most recent coordinators: Giovanna Reisling is picking up the torch as the Ohio State MMP coordinator; in the fall of

2016 Jen Nantais (Ojibway Prairie Nature Centre) and Gina Pannunzio (Essex Region Conservation Authority) started filling Caroline Biribauer's big shoes along the Detroit River Area of Concern (Windsor/Essex/Turkey Creek, Ontario); and Aaron Rusak is bringing the MMP to the inland wetlands of Ontario's Muskoka Watershed.



Terry Sprague

In addition, we would like to extend a special thank you to these dedicated supporters of our programs (start year given in parentheses).

- Andrea Court (2006), Royal Botanical Gardens, ON
- Catherine Swiatek (2013), Muskegon, MI
- Chris Ellingwood (2008), Kawartha Lakes, ON
- David McLachlin (2016), Ducks Unlimited Canada, ON
- Don Wilson (2008), Waukegan, IL
- Heather Pankhurst (2008), Central Lake Ontario Conservatiuon Authority, ON
- Ian Ockenden (2014), Nottawasaga Valley
- Conservation Authority, ON
- Kathy Evans (2007), Muskegon, MI
- Kim Frohlich (2006), Niagara Pennisula Conservation Authority, ON
- Kyle Mataya (2019), Royal Botanical Gardens, ON
- Manon Besner (2008), Prescott and Russell, ON
- Paul Prior (2008), Toronto Region Conservation Authority, ON

We are always seeking new Regional Coordinators. If you are looking to graduate to “the next level” of Marsh Monitoring and wetland conservation, consider becoming an MMP Regional Coordinator for your area!

25 Years



**MARSH MONITORING PROGRAM**

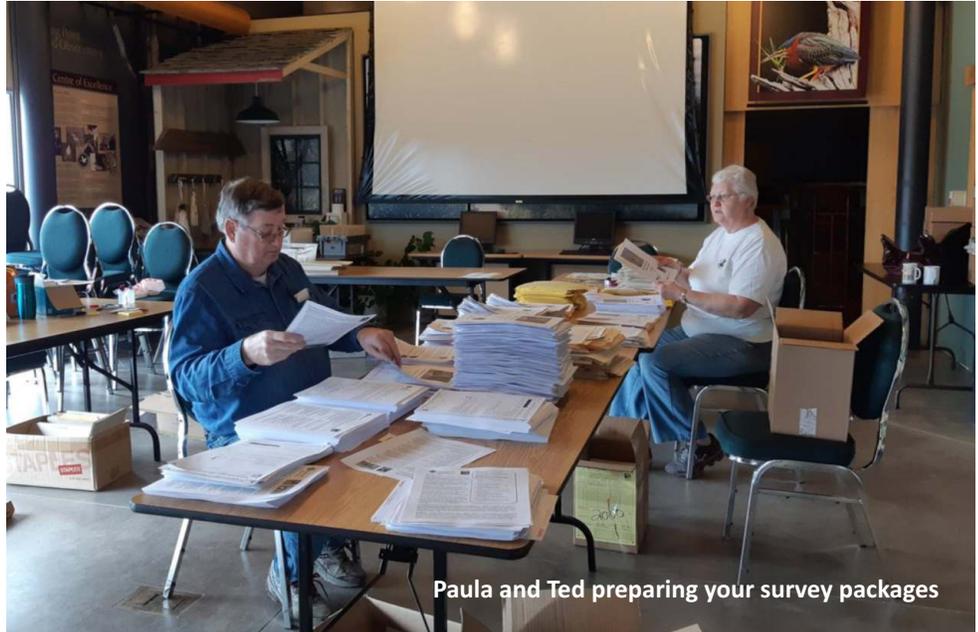
And still counting!



BIRD STUDIES CANADA  
ÉTUDES D'OISEAUX  
Canada's Voice for Birds



Bird Studies Canada Staff in Action!  
Social Media Posts



Paula and Ted preparing your survey packages



essexregionconservatic • Following ...

community of #citizenscientists together and try out their skills for identifying visually and learning the calls of #amphibians and #birds. .



Kathy Jones @BSCOnt · Jun 27

Last night I finished my #GLMMPSurvey. Lots of birds, fish swimming along the trail (carp, long-nosed gar, small bass, sunfish, maybe rock bass). Turtles and frogs were heard and seen and people could be heard enjoying the last week of June. #CitizenScience #FieldNotes



Kathy Jones @BSCOnt · Jun 7

Wednesday night I conducted my #MMPSurvey for birds as well as the last #frog visit. It was a beautiful evening. #citizenscience @BSC\_Ontario @BirdsCanada



# The Marsh Monitor

Great Lakes Marsh Monitoring Program, Bird Studies Canada

P.O. Box 160, Port Rowan, Ontario, Canada N0E 1M0

Toll-free: 1-888-448-2473 ext. 124

[birdscanada.org/volunteer/glmmmp](http://birdscanada.org/volunteer/glmmmp)

[volunteer@birdscanada.org](mailto:volunteer@birdscanada.org)

Join the conversation using **#MMPSurvey** or **#MarshMonitoring**

Are you a registered participant in the Great Lakes Marsh Monitoring Program? If so, USE the **NatureCounts** online website

[birdscanada.org/birdmon/mmp](http://birdscanada.org/birdmon/mmp)

## for ALL your Great Lakes MMP needs:

- Regional coordinator list
- Brochure
- Handbooks (protocols)
- Fact sheets
- Survey forms
- Past MMP Newsletters
- Bird call broadcast MP3 file
- Training MP3 files
- MMP metadata
- Custom data search engine
- Online data request application
- Data download tool
- Results and trend graphs
- **Updating contact information.**

To access monitoring resources on NatureCounts you will need to register through the NatureCounts Marsh Monitoring Program Home page and wait for approval.

## Launched in 1995, the Great Lakes Marsh Monitoring Program is:

- A bi-national, long-term monitoring program developed by Bird Studies Canada;
- Built on the commitment of individuals, foundations, governments and non-governmental organizations that work in partnership toward effective conservation;
- A coordination of skills, interests, and stewardship of hundreds of citizens across the Great Lakes basin.



A program of:



With Support from:



**Bird Studies Canada would like to thank all Marsh Monitoring Program participants. Your efforts make this survey successful!**



Assistance for this project was provided by the Government of Ontario.

This project was undertaken with the financial support of the Government of Canada.

Ce projet a été réalisé avec l'appui financier du gouvernement du Canada.

