# Rapunzel, Rapunzel, Let Down Your Golden Hair: Using Study-to-Story to Bring Environmental Research Out of the Ivory Tower

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**Abstract**

Most scholarly environmental research in the natural sciences, social sciences, and humanities appears in niche journals or discipline-related conferences with little or no attention from journalists and, thus, little public attention. This case study describes how students affiliated with Great Lakes Echo, a university-related regional environmental news service, find, analyze, contextualize, translate, and report on academic studies for general audiences. This study-to-story model can be adapted by other programs to encourage student reporting that draws on environmental research.

**Keywords:** environmental reporting; student journalism; scholarly studies; news dissemination; Great Lakes

## Introduction

A Brothers Grimm fairy tale tells of the beautiful young Rapunzel imprisoned by a witch in a tower. The maiden is saved after a prince successfully implores her to let down her unusually long golden hair so he can use it like a ladder and climb to her rescue (Untermeyer, 1962). So, much like Rapunzel, many environmental researchers are imprisoned – or, more precisely, their work is imprisoned – in metaphorical ivory towers known as scholarly journals. Most of them are peer-reviewed publications – frequently niche publications – that lack the glitzy public relations apparatus of such prominent and media-savvy mainstream journals as *Science*, *Proceedings of the National Academy of Sciences* (PNAS), *Nature*, and the *Journal of the American Medical Association* that effectively tout their upcoming articles to a listserv of journalists and editors. with detailed information ahead of the release of each issue. That information includes an easy-to-understand abstract, media contacts, and a link to each study.

Publishing, posting, or broadcasting of stories about those studies is embargoed until the official release of the issue. On the plus side, journalists have several days to do their reporting before the issue is published. On the minus side, there is no exclusivity, no scoop, no breaking stories – all news media receive the same advance information and are subject to the same embargo.

In contrast, most environment-related studies that Great Lakes Echo reports about appear in smaller and niche journals that few, if any, other reporters usually look at. That gives its stories the impact and prominence of exclusivity because we are usually the first news organization to cover them. Their limited circulation and the absence of media coverage does not make their studies any less valid, credible, or – from our perspective as environmental journalism educators – potentially newsworthy.

**Great Lakes Echo**

In 2009, the Knight Center for Environmental Journalism at Michigan State University's School of Journalism established Great Lakes Echo as the successor to two previous regional environmental journalism experiments. One had aggregated Great Lakes Basin environmental news generated by other media outlets. The second predecessor was a news wiki that posted student reporting and public contributions with the same geographic focus (Freedman and Poulson, 2015). The Center saw Great Lakes Echo as a venue for "students to create traditional and new forms of environmental journalism while staying rooted in journalistic values of fairness, balance, accuracy, and ethical practices" (Freedman and Poulson, 2015, p. 191). It was also intended as a hands-on learning tool and an avenue for students to build their resumes and

portfolios with professional-caliber reporting and writing that would help them find jobs, internships, and graduate school opportunities.[1]

Great Lakes Echo falls squarely within the mission of the Center, which was founded when the John S. and James L. Knight Foundation created the first endowed chair in environmental journalism in the country in 1994. It serves undergraduate and graduate students and professional reporters with specialized training and courses and conducts collaborative research and professional development initiatives with partners in the United States and abroad

The Center and Great Lakes Echo define "environmental news" broadly to include many aspects of agriculture, public health, transportation, and energy. Most of the study-based and study-citing stories analyzed in this paper were about the sciences, such as ones on invasive species in the lakes (Paulis, 2024) (Figure 1), "forever" chemicals in Lake Huron (Thornton, 2025), and invasive earthworms in Michigan (Hill, 2025), and the social sciences, such as ones on seniors' preparation for extreme weather in Ohio (Lincolnhol, 2005a), farm injuries (Scheer, 2024), and a farm labor shortage in Ontario (Lincolnhol, 2025b). Some, however, encompass strong components of the humanities, such as stories about "abandonment tourism" in Detroit (Bella Castro, 2025) and the impact of Anishinaabe fire practices on ecosystems (Witke, 2025).

The most popular Great Lakes Echo story ever reported about a study on legalization of hunting of double-crested cormorants, a controversial waterfowl (Meier, 2018). Ten paragraphs in that 28-paragraph story drew from a University of Minnesota study in the *Journal of Wildlife*

[1] Other universities also have environmental and science publications with student-produced content, with or without a geographic focus. They include the Mississippi River Basin Ag & Water Desk at the University of Missouri, the Water Desk at the University of Colorado, and South Jersey Climate News at Rowan University – all with a geographic focus – and Scienceline at New York University.

*Management* and from the student reporter's interview with a co-author. It received 104,491 views and 18,300 shares as of March 19, 2026.

Great Lakes Echo generally posts two to four stories per week during the academic year and fewer during the summer when the environmental reporting courses are not taught. We hyperlink to the study, or to the abstract if the study is behind a paywall. The content is freely available under a creative commons license; many stories are republished, posted, hyperlinked, or otherwise disseminated by other news outlets, public agencies, environmental and industry groups, and environmental lawyers, primarily in the eight states and two provinces of the Great Lakes Basin. Funding comes from the School of Journalism and from grants; Great Lakes Echo does not take advertising. Stories with Michigan content are also redistributed by Capital News Service, the School of Journalism's upper-level public affairs reporting practicum in which students cover Michigan public policy, government, and politics for about forty subscribing news outlets across Michigan (Freedman and Poulson, 2015). As of March 19, 2026, the Great Lakes Echo website had 1,605,167 total page views and 1,148,286 total visitors since its inception.

Student-produced content – original stories, graphics, photos, and occasional audio and podcast pieces – comes primarily from three sources: students paid by the Center per story on a freelance basis and students enrolled in environmental reporting courses. Students in both categories receive training about research methods and how to read and assess scholarly studies. That knowledge is essential in helping them learn what types of cogent questions to ask during interviews and how to assess the credibility of the study. The third major producers of content are students undertaking Center-funded environmental reporting internships with nonprofit news outlets in Michigan. A majority of them had already taken our environmental reporting course. Their stories are re-edited to conform with Great Lakes Echo style and are not posted until after

they have been published, broadcast, or posted by their internship employers. Great Lakes Echo also occasionally draws on two additional sources of content: stories repurposed from assignments in other journalism courses and stories written by Center-affiliated faculty.

**Research Question**

How can environmental journalism students be trained to find and "translate" scholarly natural sciences, social sciences, and humanities research for news stories for nonacademic audiences?

**Methodology**

For this case study (Creswell, 2014), we searched the online archive of all 261 environmental stories (the population) posted on the Great Lakes Echo website between January 1, 2024, and December 31, 2025. We identified 63 stories that were based at least in part on or referring to specific research articles. An individual story was the unit of analysis. Two of the researchers collected and organized the stories into a Google Sheets spreadsheet, listing the story's author and whether it was produced by a student staff writer or as part of a class or internship. They recorded whether the story mentioned a study, what publication the study originally appeared in, and what institutions were affiliated with the study. We did not include stories with only generic attributions such as "researchers have discovered" or "some studies found." Also excluded were stories about books, unpublished research in progress, working papers, and reports. On a separate spreadsheet, we tallied the frequency of journals and conferences. An academic journal's ranking – how influential it is compared to other journals – is measured in a variety of ways. For our purposes, a journal's "impact factor" (IF) was the most accessible metric. Impact factors are calculated annually by dividing the number of article citations by the number of citable articles in the journal over a two-year span (Sharma et al., 2014). As a measure of journal ranking, we

retrieved the most recently listed impact factor metric from each journal's website.[2] It should be noted that IF is just one of many measures of journal influence, and different subjects or academic disciplines may show variations in IFs (Krampl, 2019).

**Results**

Great Lakes Echo posted 136 articles in 2024, twenty of which (14.7 percent) were based on or cited specific published studies. In 2025, 125 articles were posted, forty-three of them (34.4 percent) based on or mentioning specific studies. Overall for the two years, 63 (24.1 percent) of 261 stories were study-related. We have no definitive explanation for the increase in the proportion of study stories from 2024 to 2025. Among the possible reasons is a combination of factors such as changes in the instructors teaching the environmental reporting classes, greater student writer interest in study-to-story assignments, more aggressive searching by instructors of aggregator databases for story ideas, and greater confidence among student journalists that they can competently tackle such stories.

These studies appeared in fifty-one journals and two academic conferences. A handful of journals appeared multiple times – studies originating from the *Journal of Great Lakes Research* were mentioned the most often – in six stories.

The highest-ranked journals with articles appearing in our sample were *Nature* (IF 48.5) and *Science* (IF 45.8), top-tier journals whose articles frequently garner attention from mainstream media. The lowest-ranked included *Northeastern Naturalist* and *Current Orthopedic Practice* with IFs of 0.5 and 0.3, respectively. The median IF was 2.9, confirming that Great Lakes Echo tends to focus its reporting on studies from lesser-known journals. Because IF measures a

[2] One journal, *PLOS Climate*, does not list its impact factor on its website. Instead, we retrieved it from Web of Science's journal database.

journal's influence, not its quality, featuring a study from a lower-ranked journal in Great Lakes Echo highlights solid research that might not be picked up by other media outlets.

Examining the most recent two years of Great Lakes Echo coverage was also instructive beyond the content analysis. Many – but not all – stories mentioning studies included a hyperlink to the study. Linking to primary sources not only increases Great Lakes Echo's credibility as a news source, but also provides inquisitive readers with a convenient option for exploring a topic further. Going forward, we'd like to ensure *all* study-related stories provide a link to the source. Stories should name the journal where a study was published, a practice that was somewhat spotty in our population.

**Lessons learned: Prepare student journalists to report about studies on environmental topics**

We suggest five fundamental or baseline questions that our environmental journalism students should strive to answer in their study-to-story articles.

- What did the researchers find?
- Why did they look for it?
- How did they look for it?
- Why does it matter?
- What are next steps in the operationalization of the findings and/or further research?

These five questions need not be answered in this order. For example, a hypothetical study-based story about microplastics in brook trout caught in a small inland stream might begin with the startling new finding of contamination there (what the researchers found). Or it may start by presenting growing concerns about adverse effects of microplastics on fish and wildlife health

(why the researchers looked). Or the story may have a scene-setting lede describing middle-school students testing the stream water as part of a science class to gather data that professional researchers need but lack the funds, time, or personnel to gather themselves (how the researchers looked). Or the story may open with how training schoolchildren – think of them as junior citizen-scientists – to take part in real-world applied scientific research can motivate them to become environmental activists or professionals. Or the article may start with how middle-school teachers throughout the Great Lakes region plan to replicate the project with their own students by testing local waters for microplastics and sharing the results with scientists and government environmental agencies (next steps).

*Finding potentially newsworthy studies*

Students should learn how to use research-centered aggregator databases such as Web of Science, JSTOR, Science Direct, Project Muse, SCOPUS, Gale OneFile Agriculture, and Google Scholar for keyword searches. For Great Lakes Echo, our most often-used search terms are "Great Lakes," "St. Lawrence River," and the names of the individual states and provinces in the Great Lakes Basin; we exclude "Africa," which has its own Great Lakes region. Other fruitful sources are studies publicized by universities, museums, botanic gardens, zoos, research institutes, public agencies, and environmental organizations. Those entities often have communications or media relations staff that promote a curated selection of their faculty and staff research through listservs that students can join, press releases, and e-newsletters. We also browse government websites that post links to new studies by agency employees and their collaborators. For example, we have identified and reported on a number of newsworthy studies found on the websites of the U.S. Forest Service's Northern Research Station and the U.S. Geological Survey.

Scholarly conferences are also potentially rich sources of studies to mine, and their papers are usually available well ahead of their publication in journals. Therefore, we look at the programs of upcoming and recent conferences of such organizations as the International Association for Great Lakes Research.

Two cautionary notes for environmental journalism students: First, they should look for the origin of funding for the research. Who pays? While some studies receive no outside money or other support beyond what the author's university or institution provides, external funding is common in the sciences and some social sciences. It may come from a federal agency, such as the National Science Foundation, National Institutes of Health, and Environmental Protection Agency. It also may come from a business or industry association, a corporation, a nongovernment organization, or a multinational organization. And who benefits? Might the underwriter – a pharmaceutical company, for example, gain a financial advantage over its competitors – from the findings of a study it underwrote? If there is external funding, the reporter and editor can decide whether to mention that in the story.

Second, students should be aware of the growing prevalence of predatory – pay-to-play – journals and conferences that have no independent peer review process, charge high publication fees, and prey predominantly on international and domestic graduate students and junior scholars who must publish or perish (Koerber et al., 2023; Xia, 2022). Most reputable aggregators have procedures to screen out predatory journals, but they are not 100-percent effective. Also, Google Scholar allows individual researchers to upload their own journal articles and conference papers, including predatory ones. Some predatory journals have titles almost identical to those of legitimate journals. For example, *Journalism & Mass Communication Quarterly* is the flagship journal of the Association for Education in Journalism & Mass Communication, while

*Journalism and Mass Communication* from David Publishing is predatory (Freedman and Kurambayev, 2022).

*Determining newsworthiness*

Research – or re-search – literally means searching again, It is a process that builds on what predecessors found and failed to find. Researchers across disciplines produce a flood of products – journal articles and conference papers – some considered significant, others not. But what is significant or of interest to peers in their own or closely related academic fields or to a particular industry or particular government agency or profession may be less significant or of no interest to consumers of Great Lakes Echo reportage, people we facilely and stereotypically describe as "ordinary" readers, viewers, and listeners.

To that end, environmental journalism students need a sense of their intended audience. While we have not done a demographic study of Great Lakes Echo readers, we know anecdotally that they are not only interested in environmental – as broadly defined – issues, events, and policies but may also have more relevant knowledge of the science, politics, and laws in the region than many consumers of traditional mainstream news media. Based on clicks and site visits, we have a well-informed idea of the topics with the widest appeal to our audience, especially stories about wildlife, and those of limited appeal, such as hyperlocal stories. So, in deciding whether to develop a story from a particular study we exercise professional judgment to identify an angle that meets such newsworthiness indicators for our audience as proximity, timeliness, human interest, prominence, novelty, conflict, and impact (Bender et al., 2019).

Scholarly studies often dive deeply into multiple research questions and hypotheses, any of which may provide a newsworthy focus of a news article. Thus, a common challenge for

environmental student journalists is narrowing the study and plucking out one or two points to focus on for 700 to 1,000 words or 60 to 120 seconds. We suggest that our students think as Traven (1934) wrote in his novel *Death Ship*: "I have learned that it is not the mountains that make destiny, but the grains of sand and the little pebbles." In other words, what aspect of a study – what pebble or grain of sand – will grab and hold our audience's attention to the end of the story?

*Reading and analyzing an academic study*

Scholarly studies are often laden with discipline-related terminology because the authors' principal intended audience is colleagues in their own or related disciplines. It is unsurprising that lay readers – including journalism students – quickly get bogged down in jargon, creating frustration, misunderstanding, confusion, and errors.

The starting point is the abstract which, if well-written, succinctly describes what the researchers looked for and what they found. Thus the abstract is frequently where a potential story focus is born, although that focus may change upon deeper reading of the study and after interviews take place.

The literature review, often labeled something like "prior research," can be useful to follow the trajectory of what scholars previously found and to provide a context and foundation for the newly published research. It sometimes provides a newsworthy counterpoint to a new study that disagrees with or is inconsistent with older studies – think, coffee is good for you, coffee is bad for you, a daily glass of red wine is good for you, a daily glass of red wine is bad for you.

To help them understand the findings, students should understand what a hypothesis is and what a research question is (Creswell, 2014) and to differentiate between them. That is an important

part of avoiding two common problems with news coverage of studies: over-generalizing and sensationalizing. Both problems also crop up when journalists skip or ignore a study's discussion of its limitations. For example, a story about a study on the connection between walkable communities and residents' health acknowledged limitations identified by the researchers, including missing data from rural areas (Perez Ibarguen, 2025).

*Identifying appropriate news sources*

While it is important to interview at least one author of a study, we require our students to interview at least two human sources, as well as using other sources such as documents and data. We advise them to cast a wide net, including sources who are academic, institutional, or research experts who are not involved in the study and may be identified from the literature review or the bibliography. Some studies, whether in the natural or social sciences, have policy implications, so potential interview sources may be legislators, government agencies, grassroots environmental organizations, industry associations, advocacy groups, and think tanks. When prospective sources are unfamiliar with the new study, we provide a copy for them to read, then suggest a date – driven by our deadline – for the interview.

*Interviewing scientists and other experts*

We have students in our environmental reporting courses who are not journalism majors – many of them from agriculture, natural resources, or social science majors – and who have no experience interviewing strangers, let alone subject-matter experts. They are also wary about asking open-ended questions and taking up a source's "valuable" time. They may feel embarrassed to ask for a plain-English explanation or definition of technical, scientific, or disciplinary jargon or terminology. They also may be unaware that many researchers – regardless

of discipline – are uncomfortable and inexperienced with talking about their work with the press and are wary about their studies being "dumbed down." One useful exercise we do in the course is to invite doctoral students in the environment sciences or social sciences to come to a class and be interviewed about their own research by our students.

In teaching interview skills, instructors draw on their own professional experience in science and journalism or communication. Environmental journalist Frank Allen devised what he dubbed G-R-O-S-S, a useful mnemonic to help students hit the essentials in interviews with scientists: G for Goals: What does the source want to accomplish? R for Reasons: Why is the source trying to do it? O for Obstacles: What impediments are there? S for Solutions: How can those obstacles be overcome? And S for Start: Either how will the interviewee begin to overcome them, or how did the source begin to get interested in the topic? (von Bubnoff, 2013, p. 49).

In addition to class lectures, we share with our students a number of helpful, practical tip sheets from journalists and journalism organizations. Among them are "Go-to questions for interviewing scientists" (SciLine, n.d.); "Interviewing Skills: How to get great stories from scientists, researchers, and health care professionals" (Shah, 2011); "How to interview a scientist" (Merriman-Clarke, 1997); "Help! I'm interviewing a scientist, what do I ask?"; (Jarreau, 2015); "Interview questions that work for newbie science reporters" (Scott, 2018); and "Interviewing people for environmental stories" (Knight Center for Environmental Journalism, n.d.). All our stories have at least one visual, and students can ask study authors during interviews for photos, video, graphics, and other visual material. Fact-checking is essential: We don't assume that people with degrees and prestigious-sounding titles and affiliations are always factually accurate. Sources are human and may misspeak, misremember, exaggerate, minimize, skew, and even lie.

*Writing the study story*

Environmental issues are frequently controversial, and the results of scholarly research can contribute to both the resolution of conflicts and the expansion of conflicts. We stress to the students and our audience that Great Lakes Echo is not an advocacy outlet and that our journalists strive for fair, accurate, balanced, and ethical reporting. While news sources have their own opinions, our articles should not reflect the opinions of the journalists who write them.

Knowledge of the audience should also be reflected in the journalist's choice of words and explanation of unfamiliar jargon, whether quoting directly from a study or from an interview. This is especially challenging with scientific terminology. A good example is the news media's growing coverage of PFAS, a frequent subject of articles about studies examining both their extensive prevalence in soil and groundwater and the seemingly intractable difficulty of how to reduce their adverse effects on human and animal health. The PFAS acronym stands for perfluoroalkyl and polyfluoroalkyl substances, geeky enough to make a reader's eyes glaze over. A story can include a simple explanation, such as "widely used, long lasting chemicals, components of which break down very slowly over time" (Environmental Protection Agency, n.d.). It can go a bit deeper, such as "valued for their nonstick qualities and water- and heat-resistant properties, PFAS are key ingredients in a range of industrial, commercial, and consumer goods" (Fisher Scientific, n.d.).

Stories with human faces and voices resonate with our audience, and study-based stories can incorporate them. For example, a study about a specific toxic dumpsite or PFAS-contaminated aquifer can include reactions to the research findings from neighbors nearby.

**Conclusion**

Science, social science, and humanities scholars need not consign their environment-related work to the ivory tower. Rather, they should think of themselves as Rapunzels and view environmental journalists as princes who can rescue their research from obscurity. Press coverage of scholarly research on environmental topics of concern can inform, educate, motivate, entertain, and in some instances reassure audiences – but only if the audiences learn about that research. The volume of clicks on study-relevant Great Lakes Echo stories indicates a public demand for such coverage. Preparing aspiring journalists and communicators to competently and accurately provide those stories furthers the mission of independent news media to shine a light on public, private, and nonprofit institutions and societal and community problems. This contribution is of growing importance as traditional news outlets continue to experience shrinking resources and as it becomes increasingly difficult to identify the actual origins and assess the credibility of social media posts. In addition, much environment-related research is taxpayer-funded directly through government grants and indirectly through public universities, so fair and accurate reportage of those studies provides the citizenry with a look at how their money is being spent.

We do not contend that the Great Lakes Echo model described in this case study should be transferred to or adapted by all other journalism programs – even by all other environmental journalism programs. We also recognize economic barriers to planning and implementing a similar model, especially compensation for faculty and adjunct editors. However, we do feel that the main elements of training and preparation we discuss are transferable and adaptable to environmental (and science and health) courses elsewhere, even if the stories their students produce are not disseminated to the public. For programs that already operate or are considering a public-facing news platform, our findings may suggest they pay more attention to finding and

reporting about studies, especially those from niche journals and conferences, providing their own audiences with news, information, and entertainment that other news outlets miss. In addition, Great Lakes Echo and similar programs illustrate a national trend of student-staffed, university-led news outlets providing news and information for their wider off-campus communities and thus helping fill gaps in local coverage through news-academic partnerships (Center for Community News, n.d.).

Two additional cautionary notes: First, a reporter's "discovery" of an unreported study should not be hyped to mislead the audience into thinking a single study or small cluster of studies provides indisputable, definitive answers to complex environmental scientific and policy situations. As noted earlier, "re-search" is a process, with each new study just one step in that process. Our stories can temper overly high expectations by mentioning research that made contradictory findings. Second, we journalists generally do a poor job in following up our stories. In other words, it's usually one-and-done, an understandable reality amid the flood of new studies generated by scholars and professionals. That said, there may be continued audience interest. Were expectations met? Are there recent discoveries that undercut or reinforce what we've already reported?

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