

# A look at lakeshore and fish issues with biologist-author Paul Radomski

After three decades with the Minnesota DNR, Paul Radomski can boast a long-time deep immersion into Minnesota's diverse lake scenes, from fish and fisheries management to related aquatic and shoreland habitats.

Born in Stevens Point, Wis., and given his kid-fishing for Wisconsin River walleyes and Little Plover River brook trout, perhaps it was natural for young Radomski to earn his M.S. in aquatic biology and fisheries science at University of Wisconsin, Stevens Point.

Also in his formative years, Radomski trapped, rode horseback, fished northern Wisconsin lakes with friends, and bowhunted chipmunks, rabbits, and deer.

"My parents taught me to value good work, to be skeptical, to question authority, and to ignore arrogant people," he told me.

Radomski's habit of critical thinking comes through in the following interview. And it spices a recently published book he co-authored with Kristof Van Assche: "Lakeshore Living: Designing Lake Places and Communities in the Footprints of Environmental Writers." (Michigan State University Press, 2014.)

When *Outdoor News* readers process the words lakeshore living, they might recall Gov. Mark Dayton's recent endorsement of 50-foot riparian vegetation buffers bordering all Minnesota lakes and streams. They could ponder topics like shoreline development, permits and variances, the state-county-township-local jurisdictional tangle, good and bad law, the natural look versus the clearing-and-cutting culture, environmental impacts on land and water, and more.

Since his Fisheries stint, Radomski has served as a science advisor on shoreland development standards, and is currently the lead scientific expert on lakeshore habitat management issues for the DNR's Division of Ecological and Water Resources.

**Fellegy:** Your work has shifted from fisheries to lakeshore issues, but these two fields obviously connect. You authored fisheries-science reports referenced in many bibliographies. Where in Minnesota did you



Paul Radomski

serve DNR's Fisheries Section?

**Radomski:** At International Falls, I studied walleyes in the Ontario-Minnesota border lakes. I assisted with efforts to rehabilitate the Rainy Lake walleye fishery with length regulations, and the Namakan Reservoir with water-level management changes. Later, as a fisheries research scientist, I studied sport-fishing regulations, walleye population dynamics in Mille Lacs, and fish-habitat loss in a large number of lakes.

**Fellegy:** Kristof Van Assche, your book's co-author, is deep into community planning and development issues as associate professor at the University of

Alberta, and as researcher with Bonn (Germany) University's Center for Development Research. Your energies and minds produced "Lakeshore Living..." Your goals?

**Radomski:** Kristof and I saw a need to organize the scattered science on lakes and landscape design. We felt lakeshore property owners, lake lovers, and government officials should have a useful and interesting book on lakeshore management. I had just spent two years assisting others in DNR on updating Minnesota's shoreland development standards. (Former) Gov. Pawlenty dismissed them because, perhaps rightly, the public and local governments might not have accepted a 50-foot shoreline buffer along lakes and rivers without some flexibility.

**Fellegy:** Your reaction to the Pawlenty buffer rejection?

**Radomski:** I was frustrated, so I took some vacation time to think more deeply and write down my thoughts about how we develop our lakeshore. Kristof and I want people to broadly rethink how we develop and redevelop lakeshore, and how governments manage that activity.

**Fellegy:** Your take on Gov. Dayton's much-applaud-

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BY JOE FELLEGY

ed recommendation that a 50-foot buffer along all state waters be enforced?

**Radomski:** That's leadership! Restoring buffers is the most important task Minnesotans can do to safeguard riparian habitat, water quality, and shoreline conditions for the whole state. I'm excited about the opportuni-

ties, but I'm also cognizant of the political and social challenges that conservation groups and state agencies will face. Accomplishing important things often requires great effort, but I'm sure great people can overcome the obstacles.

**Fellegy:** The biggest lake problems facing Minnesotans?

**Radomski:** They are easy to list. The hard part is how to solve them. There's too much poor planning and designing of individual properties and lake communities. We're seeing diminished water quality at many lakes. And, most critical, there's been substantial loss in fish and wildlife habitat. One result: a poorer fishing experience in many places. But positive things can be done.

**Fellegy:** How can property owners restore lakeshore?

**Radomski:** Never-ending conservation efforts are essential. Our book contains three chapters that guide owners who are developing or redeveloping lake properties. These chapters push necessary conservation practices: Preserving conservation features on your lake lot. Asset creation. And how best to connect family and friends with nature. We reference the wisdom of Aldo Leopold, Sigurd Olson, and William Whyte to give readers a sense of how these legendary conservationists addressed similar issues in their time.

Yes, lakeshore can be restored. Some of today's owners are returning their shorelines to natural conditions.

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# Almanac

## Radomski

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Others need to recreate their notions and ideals of a healthy shoreline. They could reduce runoff by getting water into the ground near where it falls. They could ask their governments to facilitate better zoning that benefits lake environments and related economies. There is plenty to do, and our book aims to help.

**Fellegy:** In "Lakeshore Living..." you and Kristof tackle seven system-changes that could improve our lakes. Which ones would interest the most citizens?

**Radomski:** Consider these three. First, we wrote about retooling water use and waste management. Given the seriousness of lake pollution via existing home sewer systems, we think it's time to move on to a new generation of advanced home sewer systems. Second, we push for reducing regulation complexity. Simple robust zoning rules are easier to administer and harder to evade. We outline ways how this could be done. Third, we call for a rethinking of invasive species management.

**Fellegy:** Rethinking invasive-species management? What's that all about?

**Radomski:** There's been lots of hyperbole about non-native species destroying our ecosystems. This issue is more complex and nuanced than many biologists admit. For example, Kentucky Bluegrass has had greater negative impacts on more lakes than silver carp might ever pull off. Policymakers failed to deny the importation of silver carp, and now we're spending conservation funds on their management. Since silver carp would likely do best in our polluted rivers, perhaps spending our precious funds on pollution-reduction could be most effective at minimizing the consequences of their importation, while producing other benefits. For example, instead of talking about fish barriers that are likely to fail, why not fix the Minneapolis sewer system so when it rains human waste doesn't run into the river?

**Fellegy:** What about the reality of human-assisted AIS migration?

**Radomski:** Kristof and I advocate for the reduction of human-assisted migration of unwanted species. In our book we suggest three additional goals. First, if a species isn't threatening something we value, then we shouldn't manage it at the expense of other species. One example is curly-leaf pondweed. Second, natural-resource management agencies should prioritize places where they wish to re-create and maintain the native co-evolved diversity. An example might be our national parks. Third, recognize that a big all-out war on non-native species cannot be won. We can admire the beauty of all organisms regardless of when they arrived. I'm working for nature and conservation of natural features. I'm not at war with other species. We should prudently increase species

diversity in our domestic places, and conserve diversity in our wild places.

**Fellegy:** Does the tangle of regulations, permits, and variances – with multiple governments and agencies involved – help or hinder the protection of fish and wildlife habitat?

**Radomski:** It does both. State standards, with local governments allowed to be more protective, comprise a good system that has advanced lake and shoreland habitat protection. However, this jurisdictional tangle also produces administrative inefficiencies. After working on shoreland standards and helping local governments with shoreland ordinances, I now appreciate simpler standards. Local ordinances often evolve in response to perceived loopholes and to citizen complaints. A negative result is greater complexity over time. The regulator and the regulated spend ever more time with loopholes. But in the end, a complex regulation increases the likelihood of selective enforcement – a giant problem with this regulation mix.

**Fellegy:** What good are habitat-protection laws if governments routinely grant variances (loopholes) to circumvent them?

**Radomski:** Indeed, too many shoreland variances are granted. Variances have allowed seriously bad development with negative habitat and water-quality consequences. Of course, we do need a variance process to address exceptional circumstances. Those officials on a board of adjustment, or on a board of appeal, must make difficult and impartial decisions that are often subjective. Typically they do this challenging work with inadequate training. I've been helping Dan Petrik, of DNR's Shoreland Management Program, with training local government officials on the appropriate use of variances. Minnesota has good variance laws. And providing local officials with training opportunities can result in less jurisdictional conflict and better outcomes.

**Fellegy:** Just where should Minnesota go with shoreline standards?

**Radomski:** It's necessary to re-craft state standards. They should be simple and contain essential and effective lake-protection provisions. Within those constraints, county and city ordinances can be less complex and more flexible, while still requiring eco-friendly design of lake places. A simple rule based on a good goal or principle is easier to implement than detailed prescriptive rules. If people know the why, and it's consistent with their values, then it's often easier for them to accept and comply. I can't over-emphasize the importance of an informed and connected community. From Page 144 of "Lakeshore Living...": "Showing people some of the characteristics that make a place unique, like its vulnerable wetlands or rare wetland birds, can help foster their appreciation, attachment, and stewardship to that place."

Call it a philosophy of community design that's linked to nature and to a particular land-

scape – but still allowing for a variety of individual interpretations of the place.

**Fellegy:** Describe your DNR fisheries-research work regarding Mille Lacs in the 1990s and 2000s. You faced the challenges of "treaty management" design.

**Radomski:** My first lesson learned: How certain Fisheries staff were intoxicated with the idea that numbers and statistics could become the main pillar of Mille Lacs fisheries management. I had developed advanced models to estimate walleye numbers – tools commonly used in marine commercial fisheries. Now don't get me wrong. Numbers and statistics are very important. However, predictions can be shaky, and even abused. Example: When people refer to a weather forecast, they might say with unjustified certainty "it's gonna rain today," rather than "they're predicting rain."

Back in 1995, in the early days of our treaty management work, two ideas were promoted. One option was what I'd call a target harvest, with a set of operational rules. With that approach biologists could develop harvest goals and use population metrics to manage the Mille Lacs walleye fishery so age and size distributions would resemble those observed in the 1980s and early 1990s. The other idea – the one that has prevailed – would use strict quotas with penalties for overages. That approach has seen fisheries managers focusing mainly on quotas ("safe allowable harvests") while the Mille Lacs walleye population has substantially changed. If quota management dominates your fisheries goals, and you get the quota or kill rate consistently wrong, then the fishery can go sideways. In such cases, fisheries managers will find themselves in a box of their own creation.

**Fellegy:** Did this create conflict? You're not a rubber stamp?

**Radomski:** It was indeed a life-altering experience. I attended the annual state-tribal Technical Committee meetings where year after year trained biologists argued over meaningless numbers – meaningless because uncertainties in our population estimates were quite large. I continued estimating walleye numbers with advanced statistical fisheries models until 2004. In 2004 a DNR supervisor asked me to develop a Mille Lacs quota-penalty plan that would close down sport fishing on Sundays and Mondays if state anglers exceeded the quota. I protested, arguing there was little evidence that such disruptive management would benefit the fish population. I also argued the obvious, that the economic consequences could be substantial. My protest further impacted my relationship with Fisheries Section leadership, already rocky due to earlier conflicts. I'm mostly to blame. As many will tell you, I can be difficult to deal with. I left Fisheries for a good job working on Minnesota's Alternative Shoreland Management Standards. I really didn't want to leave Fisheries Research, as it's a great place to work on

important fisheries issues.

**Fellegy:** So state agency high-ups might dislike even well-informed contrary viewpoints?

**Radomski:** The second lesson I learned was that people in an organization will ostracize an insider for criticizing an organization policy or action. And they too often believe that someone outside the organization can't possibly know enough to understand the complexities of the issue or problem. Maybe this supports the value of blue-ribbon review panels.

**Fellegy:** Finally, what's your take on the present Mille Lacs scene?

**Radomski:** I won't go there. Remember that second lesson. Yes, there are many questions regarding Mille Lacs. All Minnesota fisheries biologists worth their salt have reviewed the Mille Lacs data. However, my thoughts on the lake's present condition and management really do not matter. Questions about nature's role, about what aspects of fisheries management need change, and about possible turn-around strategies, should be directed at those responsible for Mille Lacs management.

*Writer's note: The above Q&A responses are the personal opinions of Paul Radomski.*