



Reaching the Angling Public: Turning Good Science into Good Policy

David Stalling

Western Field Coordinator, Trout Unlimited, Missoula, Montana

ABSTRACT— If fisheries scientists, biologists and managers are to gain public support for good policies, public knowledge and understanding is crucial. Unfortunately, we're living in a time when good science is often ignored, suppressed or distorted, and few people have the time, inclination or opportunity to learn and understand the truth. To gain support for and help promote responsible policies, Trout Unlimited recently launched a Public Lands Initiative to help inform and rally anglers and hunters to understand and protect public lands, and associated fishing and hunting opportunities. A large part of this effort is to clarify and disseminate scientific knowledge, and provide hunters, anglers and others with information they need to help push for responsible policies on public lands. But we need the help of fisheries scientists, biologists and managers; fisheries professionals need to do a better job at denouncing bad science, promoting good science, and providing us the information we need to demand responsible policies that protect our rivers, streams and fisheries. Starker Leopold put it this way: "Buy a trumpet, not a cubbyhole. The truth is out there. Let good science, flavored with compassion, light our way."

Writer Ann Zwinger once wrote, "If you can entice people to look at a facet of nature, they may get curious. If they get curious, they may attempt to learn something about what they are seeing. If they learn something, that becomes an irrevocable part of their experience. If it becomes part of your experience, it becomes yours in a way that nothing else in the world can. We don't own anything; all we own is our knowledge. If you appreciate it and enjoy it, you're a lot less likely to destroy it."

I would add this: If you come to understand, appreciate, and enjoy something, you're not only less likely to destroy it; you're more likely to fight for its protection. We need more people fighting for protection; we need more people who understand and use good science to support good policies and oppose bad policies. If fisheries scientists, biologists, and managers are to gain public support for good policies, public knowledge and understanding is crucial.

Unfortunately, we're living in a time when good science is often ignored, suppressed or distorted, and few people have the time, inclination or opportunity to learn and understand the truth. This is partly why politicians are so easily able to push for massive development of coalbed methane wells across the west with little, if any, understanding on the impacts to water quality, water quantity and fisheries, and undermine protections for roadless lands despite overwhelming evidence of the importance of these roadless lands to trout, salmon and steelhead.

All of our most threatened and endangered trout and salmon spend some portion of their lifecycle in watersheds on federal lands. More than 50 percent of our nation's healthiest, most prized trout streams originate on public lands. Protecting public lands is critical to the survival and restoration of native trout and salmon. Yet, too often, anglers and hunters support policies that degrade habitat on our public lands and oppose policies that would protect these places. Take the federal roadless rule, for example—the only legal protection for roughly

5.5 million acres of roadless lands in Idaho, lands that contain 87 percent of the state's healthy populations of bull trout; 83 percent of Idaho's healthy populations of westslope cutthroat, and 74 percent of Idaho's current chinook and steelhead habitat. Yet, there seems to be a lack of will among some anglers to protect these roadless lands. Sadly, too many anglers support misguided efforts to eliminate protections for these roadless lands. Collectively, we have failed to convey the importance of these roadless lands to anglers; we have failed to pass on the knowledge and understanding that is crucial for public support.

More than 50 years ago, Aldo Leopold wrote, "The sportsman has no leaders to tell him what is wrong. The sporting press no longer represents sport, it has turned billboard for the gadgeteer. Wildlife administrators are too busy producing something to shoot at to worry much about the cultural value of the shooting."

Today, many outdoor writers, and hook and bullet magazines, have become public relation arms of industry, and too many wildlife administrators are fearful of taking stances on sensitive or controversial topics. Anglers and hunters are often led by the wrong people. We need to change this. We need to do a better job of informing and motivating the public to help us protect what little remains of our wild places, wildlife, and wild trout. This begins with helping the public gain a better understanding of science.

So how do we do it? First, there's the standard advice: if you're a decent writer, or speaker, or both, do everything you can to get the word out. Write for newspapers and magazines, offer to speak to civic groups, Trout Unlimited chapters, National Wildlife Federation affiliates and others. If you're not a good writer, or speaker, or both, develop strong relationships with those who are, and constantly and consistently pitch story ideas. My friend John Ormiston, who is a wildlife biologist on the Bitterroot National Forest, once told me to view the public as an ongoing parade, different folks continually passing by, and hit them with the same message over and over. But the message has to be clear, concise and strong. I once had a job writing and editing NEPA documents for the Forest Service (not the most enjoyable work I've ever done.) A hydrologist sent me a statement that read, "Our research indicates the possibility that over utilization of domestic livestock within some riparian areas may quite possibly be having detrimental impacts on riparian vegetation, streambank stability and water quality." I was tempted to put it more simply: "Cows are screwing up the river." Instead, I rewrote it to say something to the effect of "Overgrazing by cattle could be altering vegetation, contributing to erosion, and harming water quality." The Forest Service changed it back to the original wording. I argued it wasn't clear, a bit ambiguous. My boss responded: "We want it to be unclear and ambiguous."

Among my heroes are the scientists who write well and the writers who write well about science. Aldo Leopold, Olaus Murie, E.O. Wilson, Robert Behnke, David Quamen, Ted Williams, and Ted Kerasote, to name a few. In a well-researched article for *Field & Stream* about a recent spurge of gas and oil development across the West, Ted Kerasote wrote, "If these energy policies continue, we'll have more rivers without fish and fewer hunting opportunities." Pretty clear and unambiguous.

For lots of reasons, not the least being politics, it's tough to get good, scientific information into the popular press, but particularly the hook and bullet press. Tom Beck, an avid and passionate hunter who also happens to be the chief bear biologist for the state of Colorado, once wrote a strong, science-based essay about the impacts of bear baiting on the health and welfare of bears. He also

examined the ethics (or lack thereof) of shooting bears over bait. When word got out, the Wildlife Legislative Fund of America and others rallied hunters to threaten Outdoor Life with a boycott if they ran an “anti-hunting” article written by an “anti-hunter.” The pressure worked, the editors resigned, and the article never saw print. It’s a catch 22, of sorts; we need to inform the public, but a segment of uniformed public prevents us from informing them. Certainly there are groups such as Trout Unlimited, the Rocky Mountain Elk Foundation, Mule Deer Foundation and National Wildlife Federation that publish good, science-based, thought-provoking essays and articles for anglers and hunters. Some of the bolder magazines, such as Flyfisherman and Fly Rod and Reel also do a good job. Unfortunately, too many magazines, and too many state and federal agencies, shy away from tough, complicated, sensitive issues at the slightest hint of controversy.

So how can we change that? We need to reach the grassroots anglers and hunters. We need to build a larger, stronger, more vocal constituency of citizens who understand and support good policies and programs that protect and enhance our public lands, wildlife and fisheries. For your part, you need to do a better job at explaining why our indigenous trout are important, what the threats are, and what can be done about it. You need clear, concise information that shows people the relevance of your work to their lives. You need to be consistent and persistent, develop a good, sound message and deliver it at every opportunity you can. And you need to be bold. “If these policies continue, we’ll have fewer places to fish and less hunting opportunity.” That’s a clear, concise, bold message, relevant to anglers and hunters, and can be backed by good science. If you’re not comfortable making such statements, get the information to writers, editors, speakers, and people like me, and we’ll help spread the word. We need to be better leaders. I was a Sergeant in the Marine Corps, and my favorite definition of leadership comes from the military: “Influencing people by providing purpose, direction and motivation.” If we are to save what little remains of our wild trout, wildlife and wildlands, we need to do a better job at influencing anglers and hunters with a sense of purpose, direction and motivation.

Fifty-eight million Americans hunt and fish. Most tend to be political conservative, are seen as partners with state and federal agencies, and are unaffiliated with any organizations. They could be a powerful force for the protection of our wild fisheries, wildlife and wild places. Trout Unlimited is working to rally such a force.

Recognizing the unparalleled value of public lands habitat to coldwater fisheries, drinking water, and wildlife habitat, and the growing threats these lands face, Trout Unlimited has launched a new Public Lands Initiative to protect remaining pristine fish and wildlife habitat and restore streams and rivers degraded by past mining, energy development, and logging. As part of this program, we are working to: 1) Develop sound scientific and technical information demonstrating the importance of public lands to coldwater fisheries, wildlife and fishing and hunting; 2) Build an alliance of TU members, wildlife and fisheries conservation groups, hunting and angling clubs, and fish and wildlife professionals to advocate for management policies on public lands that protect the long term health of coldwater fisheries as well as wildlife, and; 3) Inform the broader public on how incredibly important public lands are to protecting and restoring coldwater fisheries and wildlife habitat, and the tremendous fishing, hunting and other outdoor opportunities public lands provide.

In other words, we're using science, education, and citizen involvement to influence policy. Thus far, we're focusing our efforts on three areas: abandoned mine reclamation; roadless and wilderness protection; and energy development. My job is to organize anglers and hunters in Montana, Wyoming, Colorado, Utah and New Mexico to support sound, responsible energy policies and development, and oppose bad policies and development. I also speak to a lot of environmental groups. As part of my effort, I am trying to get anglers, hunters and environmentalists to work together more. As writer Ted Williams wrote in an article called "Natural Allies," for *Sierra Magazine*: "Whenever sportsmen combine with environmentalists, you have 60 to 70 percent of the population, an absolutely irresistible coalition. . . . If only hunters, anglers, and environmentalists would stop taking potshots at each other, they would be an invincible force for wildlands protection." Tony Dean, of Tony Dean Outdoors, put it this way, "There is no reason anglers and environmentalists can't agree on most things, especially the importance of clean water."

Trout Unlimited is in a good position to lead this effort. As my boss, Chris Wood, likes to say, "We are the greenest of hook and bullet groups, and the most hook and bullet of the green groups." Simply put, we're helping anglers and hunters better understand the need to protect the places we hunt and fish. In a series of reports we recently produced on energy development, roadless lands and mining—reports that have generated a lot of good national press—we are clarifying and disseminating scientific knowledge, and providing hunters, anglers and others with information they need to help push for responsible policies on public lands. Backed by sound science, we are helping to organize and focus the considerable political clout of anglers and hunters to turn good science into good policy. But we need your help.

If we are to muster support for more responsible public lands policies, we need a better, tighter intersection between science and policy. In other words, we need you to speak out. Help us denounce bad science and promote good science. For our part, we can take that information and demand responsible policies that protect our rivers, streams and fisheries. Starker Leopold put it this way: "Buy a trumpet, not a cubbyhole. The truth is out there. Let good science, flavored with compassion, light our way."

I was invited here to discuss how we can help you disseminate information. I took the task seriously, because it's a serious and important topic. So seriously, in fact, that I came up with an idea on how we can help each other—a way we can gain some attention, help inform the public, and use science to promote good policy. In my efforts to organize anglers and hunters to advocate for more responsible energy policies on public lands, I have written a letter to Secretary of Agriculture Ann Veneman and Secretary of Interior Gale Norton in hopes of creating positive pressure for responsible energy development on our public lands. I am asking each of you here today to sign onto this letter.

I will read a portion of it to you:

"Dear Secretary Veneman and Secretary Norton:

We, the undersigned fish and wildlife biologists, scientists, professionals, and restoration practitioners, all support the responsible development of our nation's domestic energy resources found within public lands managed by the Bureau of Land Management (BLM) and the Forest Service. At the same time, it is crucial that our nation's leaders recognize the extraordinary value of these lands to fish and wildlife, hunting and fishing, and other wildlife related recreation.

Our public lands sustain some of the cleanest water, healthiest habitats, and finest fishing and hunting in North America. Short-term energy production should never be allowed to diminish the long-term productive capacity of the lands and waters that sustain us all. This is the essence of the BLM and Forest Service's multiple-use mandate.

We urge you to help us develop a more prudent, balanced and conservative energy strategy for our public lands that promotes responsible, environmentally and economically sound development; emphasizes efficient methods of energy use and extraction; and seeks to expand the development of alternative and renewable sources of energy. When gas and oil development does occur, it should be based on sound science that ensures the long-term health of our fish, wildlife, and water resources.

To that end, we endorse the following principles, and urge they be adopted by the BLM and Forest Service.

- Affirm Multiple Use Management of Federal Lands in Leasing Decisions;
- Set Aside Unique and Important Areas;
- Conduct Thorough Analysis of Potential Impacts;
- Take a More Conservative Approach to Leasing;
- Maintain Federal Control and Management Flexibility;
- Revisit Leases Issued without Sufficient Data;
- Evaluate Impacts of Stipulation Waivers;
- Ensure Adequate Financial Resources for Reclamation;
- Increase Federal and State Agency Resources.

Increased exploration for gas and oil in the Rockies can help produce energy resources, but may also have negative effects on fish, wildlife, and water resources. Fisheries and big game, with significant recreational, economic, and biological importance may be among the natural resources affected by oil and gas development in this region. A better scientific understanding of potential impacts of gas and oil development on fisheries, watersheds and wildlife is essential to assist resource managers in making informed decisions for promoting sustainable development, adequately predicting potential- impacts, and avoiding, decreasing or mitigating threats to our natural resources.

Thank you for your attention to our concerns.”

There's more detail in the letter. I have copies in the back. Please grab one, read it and either sign onto it today and get it back to me, or, if you'd rather, you can mail it back to me, or email me your permission to be included. My contact information is on the letter. I hope you will take this task as seriously as I did. Please help us help you to promote and use good science to influence good policies. Working together, we can protect what little remains of our wildlife, wild places and wild trout.

Becoming a Better Communicator

Spencer E. Turner

Quail Ridge Publishing, 5701 E. Mexico Gravel Rd., Columbia, MO 656202

ABSTRACT—Biologists focus on individual projects, working with the animals they manage, and on the day-to-day minutiae of being part of a public agency. They come to the profession wonderfully prepared to conduct surveys, sample fish, assess results, but unprepared to assume the role of program promoter, writer, or lobbyist. I will suggest ways to improve writing and speaking skills; and ways agencies can facilitate a positive atmosphere where biologists and supervisors can improve communication skills, and reduce resource management problems.

Biologists by their very nature focus on individual projects, working with animals and habitats they have been assigned to manage, and on the day-to-day minutiae of being part of a public agency. They come wonderfully prepared from school to conduct surveys, sample fish, assess results, but unprepared to assume the role of program promoter, writer, or resource lobbyist. In other words, they are unprepared to sell their product to the consumers, anglers most affected by proposed management programs.

Mid-level supervisors focus on overseeing staff operations; keeping agency day-to-day minutiae flowing upstream and down; editing products produced by staff; and making sure staff follows all agency rules and regulations. Most, maybe all, are biologists, promoted from the ranks. They are unprepared to provide an atmosphere that allows staff to work actively with constituents or promote projects and management programs. Instead of working with staff to help sell priority programs, they become bottlenecks to the selling process, passing this responsibility to I&E sections.

How do we change this?

Most of my suggestions apply to both biologists and supervisors. But, for sake of clarity, I'm going to address each group separately, provide suggestions on how to improve the abilities of biologists to communicate effectively with constituents, and reduce some of the angst biologists deal with annually.

Biologists

Good communication skills provide the key to moving beyond simply being a biologist. When you graduated with a BS, or MS, or PhDs, and landed your first job, you came wonderfully schooled in biology, statistics, management techniques, mathematics, computer use, but how much training did you receive in popular writing, speaking, designing and making presentations, etc.?

I had three basic communication courses as an undergraduate and two technical writing courses as a graduate student. I wrote a thesis, but that was all.

Although we have greatly improved our education system and our biological knowledge base, we have failed to broaden our education base to include the social aspects of managing resources. This lack of training makes it your responsibility to acquire those skills you lack, after you join an agency and begin your careers.

What are you Lacking?

Writing Skills

Technical writing is easy; the format is set in stone. Plug in your introduction, materials and methods, results, discussion and literature list, then cap it off with an abstract and you are done. And, as taught in technical writing 101, you do this passively, removing all active construction and personality from the discourse. How do I say boring? Other biologists will plow through your reports and publications, but not resource users.

Writing is a learned skill. It is a skill that can be taught through participatory agency education workshops; voluntary writing groups, led by skilled writers within your agencies; by working one-on-one with agency publication editors; or by organizing and attending communication workshops presented by skilled professional communicators from organizations such as the Outdoor Writers Association of America (OWAA), Southeastern Outdoor Press Association (SEOPA), or Northwest Outdoor Writers Association (NOWA).

Biologists can improve writing skills by sharing written material for editing with other biologists. Both biologists benefit from this exchange.

For example, I shared written material with a fellow biologist, who was and is one of the best technical wordsmiths I know. He routinely bled all over my “Sacred Words” with suggested changes, and I’d reciprocate. We knew we didn’t have to take the suggestions, but could pick and choose. Not surprisingly, the end product always improved. Not having the pressure of a supervisor suggesting changes, made the whole editing process less stressful.

One caution: participants must leave their egos and feelings outside the workshop or the editing process. Having someone edit your “Sacred Words” can be gut wrenching. You have to develop a thick skin. The end product will always improve and your name will be on it.

Beyond improving writing skills, design projects to get paid to write and publish the results. Most biologists and agencies work under D/J and W/B funding and must submit project designs with objectives and timetables for the project. Writing takes time. Why not include objectives to complete the final report and publish the results in a professional and popular venue – AFS publications; outdoor magazines; local newspapers; agency publications; even constituent newsletters such as local Trout Unlimited or Federation of Fly Fishers chapters.

I’m not going to attempt to teach you how to write; this you learn by doing, being edited, revising, and ultimately publishing. However, let me provide a few suggestions to improve and help with the writing process.

- Write actively. Active writing is cleaner, shorter, more to the point and much easier to read.
- Add personal antidotes to articles written for the general public. People like to read about people, even you. Statistics bore people to tears.
- Use humorous antidotes. Humor is difficult to write, however, the best humor is self-deprecating humor, especially when it helps make your point.
- Seek opportunities to be published. Small newspapers welcome submissions, especially when they are free; newsletters published by FFF, TU, or other conservation organizations welcome submissions; and

fisheries websites are always looking for conservation material. Be proactive.

- Edit your missives ruthlessly. Word processors and computers, make writing and editing much easier, almost fun. They remove the physical component of writing. Editing can continue until you print the final draft, and even then, if a mistake has been made you can change your product and reprint a revised draft.
- Learn how popular writers structure articles. Like technical writing, outdoor writers use a very distinct format. Read outdoor magazines, not for content, but to learn how articles are constructed. Most start with a hook to grab the reader, followed by the article's meat, and then the authors wrap the article up with an ending tying the article back to beginning. The exceptions to this are newspaper articles, where writers present the most important information in the first couple of paragraphs. This journalistic style developed because most newspaper readers only look at headlines and read the first couple of paragraphs.
- Read manuscripts out loud, and, as you read, mark each section where you have to pause. You will find those marks represent problems in your manuscript and should be revised.

Verbal Communication Skills

Verbal communication skills are also learned by participating. I'm not going to say much about this aspect of a biologist's job. In my view, any biologist worth his salt seeks opportunities to become part of the "Rubber Chicken" circuit, speaking to angling groups and conservation organizations about current projects, resource management programs, and local resources. Don't wait to be asked, become proactive.

Place yourself on constituent mailing lists and volunteer to present programs at least once a year or more, where you discuss projects, area resources, and potential management options.

Making management changes becomes much easier, when constituent groups know you personally, have developed a working relationship, and have received information regularly about potential changes. Anglers like to feel a part of the management process. This can be a series of regular talks; invitations to observe or participate in sampling excursions; or short updates in newsletters.

Supervisors

Most supervisors are biologists by training. They are good technical editors; understand technical formats, and how technical papers are written. They don't understand, however, popular formats or what it takes to produce a publishable popular article for a magazine, newspaper, website, or even a newsletter.

They also feel insecure when biologists work outside the traditional agency role and structure. This feeling results in over editing, restricted annual budgets, and narrowly defined job objectives. This frustrates biologists, increases the workload, and ultimately reduces an individual's incentive to become better communicators and better promoters of agency programs.

To change this, supervisors need to attend and participate in the same writing and editing workshops as biologists; encourage biologists as part of their job

responsibilities to become involved with constituents through annual work plans and objectives; and encourage professional staff to function as a frontline information source for anglers affected by fisheries programs, rather than leaving this to I&E staff.

In the long run, this will make management and regulation changes much easier and less controversial; professional staff will feel a part of the management process, rather than simply the person doing grunt work; and it will make your job much easier. Trust your staff, provide an atmosphere supporting and encouraging the development of good communication skills and proactive involvement with constituent organizations.

Summary

Good communication skills, both the written and the spoken, are best learned by participation, editing, rewriting, and rewriting, and rewriting. Written and spoken communication skills are a learned art form. Computers and word processors take most of the physical work out of the process, leaving the creative and technical skills to be melded to informing constituent groups. Supervisors need to be part of the process, providing administrative support to allow communication skills of professional staff to grow and mature.

Suggested Reading

- Goldstein, Norm. Editor. 2004. **Stylebook** and Briefing on Media Law. Published by The Associated Press, 50 Rockefeller Plaza, New York, NY 10020
1995. **OUTDOOR STYLE MANUAL**, Published by Outdoor Writers Association of America, 121 Hickory St., Ste. 1, Missoula, MT 59801 (Currently being revised, but should be available in 2005)
- Zinsser, William, 1980. **ON WRITING WELL**. Published by Harper and Row, 10 East 53rd St. New York, N.Y. 10022.
- Tichy, N.J. 1967. **EFFECTIVE WRITING**, For Engineers, Managers, Scientists. Published by John Wiley and Sons, Inc. New York.
- Strunk, William Jr. and E. B. White. **The Elements of Style**. 4th edition. Published by Longman.

