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The Natural Resource Challenge: A Retrospective and View to the Future

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About 10 years ago, I was invited to speak to a graduate class at the University of Wisconsin, Madison, by an old friend, Professor Don Field.

After class, Field said, “Do you want to go to the shack?” “*The shack?*” I said. Aldo Leopold’s Sand County shack?

So we drove down to the river and parked along a country road, and wound our way through the forest now grown from the over-used and cutover lands that were inspiration to Leopold’s “A Sand County Almanac.” And there it stood, the old Chicken Coop, now turned shrine to all of us who grew up with Leopold, Muir, and Eiseley.

The door was not locked, and inside the furniture and furnishings were the same as when Leopold developed the core principles of the conservation ethic of America for the next century. On the mantel over the fireplace, I opened a box of carefully prepared specimens, each tagged with the handwritten notes by Leopold himself.

For me, a trip to the shack was akin to a Muslim pilgrimage to Mecca. This was a place where civic engagement worked to change the course of the American land ethic and stewardship. Leopold envisioned a better world and challenged us to make it so.

In his classic essay on the conservation ethic, Leopold wrote of his disappointment with the slow progress in conservation education, and that the “usual answer to this dilemma is ‘more conservation education.’”

In turn, Leopold argues that such education will continue to fail until we help people develop a “love, respect, and admiration for land, and a high regard for its value.” “No important change in ethics was ever accomplished without an internal change in our intellectual emphasis, loyalties, affections, and convictions.”

I want to talk about the Natural Resource Challenge as a turning point for the National Park Service (NPS), in many ways the culmination of several decades of a paradigm shift in the organization that has affected, as Leopold put it, our “intellectual emphasis, loyalties, affections, and convictions.”

Essentially, the culture of the NPS has changed from one in which it focused primarily on the visitor, to one that prides itself in managing, protecting, and understanding the complex natural and cultural resources for which it has stewardship responsibilities. I do not mean to imply that the visitor now takes a second seat to the resource, but that visitors are provided high-quality experiences within the context of a far more sophisticated resource management program than we did twenty years ago. Those doubting that we have changed need look no further than the Natural Resource Challenge, a bold, \$75–100 million budgetary initiative that transitioned smoothly between two presidents and has been well received by the field, the Congress, and the Office of Management and Budget.

Some would characterize the NPS as hide-bound, or, derisively, “mulch ridden.” I think a better analogy is the battleship, slow to turn, but deliberate in its mission, which is to pre-

serve and protect parks for the enjoyment of future generations. Our resistance to change is a double-edged sword. Resistance keeps us from blowing with the particular political wind of any given administration or Congress, but when a good idea comes along, we also resist, or at least take a long time to incorporate it into our ideology.

In 1993, I authored an article for *Park Science* about the litany of reports written and published by highly respected organizations that admonished the NPS for its lack of attention to resources, particularly natural resources. Our record on this front was, frankly, embarrassing, particularly for me at the time, as one of those young whippersnappers who wanted the NPS to be the premier resource management agency in the U.S., if not the world. Those reports, while important to the recognition of the issue, were relatively ineffective in changing the agency.

The following are the essential items I would identify that have were key to the paradigm shift. Of course there were things going on outside the agency within the American society and the world that affected the parks and the National Park Service, which pushed us to have a more resource focus, but for the purposes of this talk, I will focus mostly on the internal items, as follows.

An articulate and effective champion in Washington. In my tenure, I would place now-retired Ro Wauer in this slot. The former associate director for natural resources, Wauer was a tireless champion within the organization for a stronger focus on natural resources. Far from a complainer, Wauer was a doer, and the creation of the Natural Resource Trainee Program, his brainchild, was one of the most important acts that changed the organization. Few programs ever succeed without good leadership in Washington. For the Challenge success, I would put that same mantle on Mike Soukup.

A peer group fed into the lower level in the organization. Wauer created the two-year long Natural Resource Trainee Program, and over a period of about 10 years more than a hundred bright, young, motivated natural resource professionals were fed into the organization at the relatively lower grades. I was in the first class. At our first meeting in Fort Collins in 1982, Wauer was clear in his goals, expecting us to infiltrate the agency and rise to the top as new superintendents, regional chiefs, and top leaders. From those humble roots to leadership positions, we have been able to shift policy, hiring, funding, planning, and even the dialogue towards an agency with a resource focus. As the Pacific West Region regional director, I have now hired 33 superintendents, and the majority is coming from the resource management ranks.

External pressure. Call them our friends or our critics, the National Parks Conservation Association and other organizations have consistently pushed us to live up to our potential by challenging our resource stewardship through the media, through their membership, and through periodic reporting. The “threats to the park” reports focused attention not only on our stewardship but our lack of investment in understanding of the resources within our responsibility.

Visionaries who serve as role models. While the NPS is a decentralized organization, there are always as few senior leaders who are looked to for wise counsel and emulation. During this period, two rise in my mind. One is Bob Barbee, the Golden Buffalo and superintendent of Yellowstone who faced large resource issues such as brucellosis-carrying, migra-

tory bison and large natural fires with not only characteristic humor and resolve, but with good, old-fashioned hard science. And he won, and we all like winners. The other was Boyd Evison, former superintendent in many parks and regional director for Alaska. An eloquent spokesperson for the environment, Evison saw and acted on the opportunity presented by the vast parks of Alaska, and invested in a strong science and resource management program with a focus on inventory and monitoring. Other regional directors and superintendents around the country took notice of these exceptional leaders and emulated their attention to these issues.

Lead parks. As there are a few lead individuals, there are always a few lead parks in each region that establish new directions that lay the groundwork for other parks to follow. Parks that invested in long-term monitoring grew in respect because that had a better grip on their stewardship. Yellowstone's large science center, Olympic's GIS program, Isle Royale's wolf-moose study, Denali's predator-prey work, and Everglades water, Shenandoah's air quality, and Yosemite's fire programs come easily to mind, among others. Their investment, notoriety and success inspired other to emulate.

Professionals who walk in both worlds. At this time too, the NPS still had its small but highly qualified core of park-based or Cooperative Park Studies Unit-based scientists. Practicing scientists with the ability to serve on major university faculty and supervise students, but with field-level practicality that allowed them to chew the fat with superintendents and their staff, these unique men and women were the emissaries of research, mentors for budding new resource managers, and unofficial counselors to park decision-makers faced with increasingly complex resource issues. They were, through both word and deed, champions of the notion that good science guides good management.

Training in the subject matter. As the parks' issues became more complex, as the trainee program became more recognized, there was a cry from the field for more technical resource training, and an investment in resource training for managers. A plethora of classes emerged in what is often called our "cradle-to-the-grave training program." For some managers, particularly those who came up through the ranks in non-resource fields, this was their first real exposure to formal training in the application of science, in the world of National Environmental Policy Act compliance, or the protection of endangered species.

Communications tools. Emulation requires that you know what someone else is doing. Two small publications come to mind: *The George Wright Forum* and *Park Science*. *Park Science* was started in the old Pacific Northwest Region by Jean Matthews, and the *Forum* by Bob Linn and Dave Harmon. These became the communication tools for fledgling programs to learn about each other. Remember, this was before email and the internet.

Policy without money is just talk. That infamous quote from the former director, George Hartzog, is as true today as it was then. The first real money set aside just for resources came as NRPP: the Natural Resources Preservation Program. It was a competitive fund source managed out of Washington but designed to fund the best resource management projects in the system for three years running. The total fund was small, but it was a start and from that came increasing fund sources, so that today there are dozens of sources just for natural resources and for cultural resources. This does not count all the park base funds that are now supporting basic resource management activities in most parks.

Technology that works and is cool. The last twenty years have seen an explosion of technology that can be applied to science in the field. Some of it, like the great maps coming from GIS, is “eye candy” that helps convince upper management and the public that science is not boring and can provide powerful insights into complex issues. The public interest in the results of good science, incorporated into interpretive and education programs, has been essential to public support for the parks and the emergence of a higher level of stewardship.

Legal challenges. Periodically, it takes some litigation to snap us to attention. The Sierra Club Legal Defense and North Cascades Conservation Council lawsuit on the North Cascades National Park Complex was a great case in point. The NPS had not invested in the gathering and quantitative analysis of the information it really needed to make the kind of land use decisions within the draft general management plan and environmental assessment. The settlement agreement set a new standard for environmental impact statements in the NPS for all general management plans.

Focused conferences. For decades the George Wright Society’s biennial conferences have been a vital forum for the discussion between scientists, resource managers, and park managers. Because of frequency, consistency, and continuity, the dialogue created in these conferences has built over the years to the point that they have become one of the most important gatherings of NPS and other protected area resource professionals.

A critical book. Richard Sellars’ bold and well-researched book, *Preserving Nature in the National Parks*, came at a perfect moment, and presented a clarion call to action. Fortunately, this time, we were ready. While I believe it will stand the test of time as a wise treatise on the history of the NPS, coming at a different time, without all the other actions outlined above, I doubt there would have made a significant difference in the agency. Instead, it caused top leadership to recognize the opportunity and declare, finally, the agency was making resources a priority not only for policy but also for budget. From that grew the Natural Resource Challenge, the best budget initiative we have seen in some years.

The units of the national park system represent some of the best places in America to study and understand the complex natural and cultural heritage of North America. Over the last 20 years, we have exponentially increased our capacity to invest in that understanding and to pass along what we are learning to the public. I believe our organizational culture has changed for the better. Yet, I still do not believe the NPS has reached its full potential in American society—that will take another culture change, but hopefully not take as long.

At the conference of the National Park Service and our many partners known as Discovery 2000, one of the plenary speakers made a bold challenge to the National Park Service: it was our job “to make this great experiment in American democracy succeed.” He said we have the places and the passion, and the people and the audience, to engage the public in such a way as to ensure that our democratic principles stand.

In Yosemite National Park, there was a recent resurvey of the work pioneered by biologist Joseph Grinnell and his colleagues in 1915. This time, armed with live traps instead of snap traps, the team resurveyed the small mammals of Lyell Canyon. They found significant changes in the populations of ground squirrels, pikas, piñon mouse, and the alpine chipmunk. Some of them had moved up in elevation by 2,000 feet since surveyed by Grinnell 100 years ago. These are indicators of global climate change. We all know too that these lit-

tle creatures can only go so far up, until they are popped right off the top mountain into extinction.

You and your fellow scientists and resource managers are the Joseph Grinnells of this generation, laying down a foundation to understanding of parks that will be a platform for management action and public awareness.

So what lies before us as stewards of these great places? What *will* we do, what *should* we do with this newfound knowledge borne of the Natural Resource Challenge, in year 2020, 2040, 2050 and beyond? I have my ideas, but frankly, I would rather hear from you.