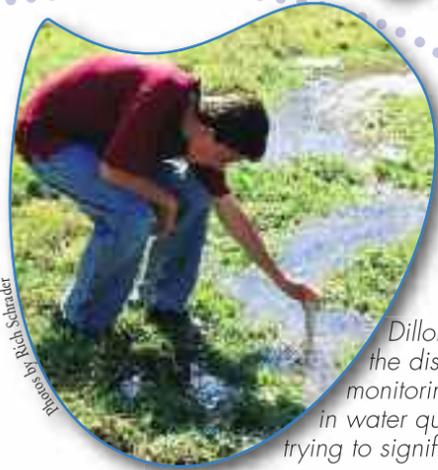


Take Me to the River



Dillon Waldbauer of East Mountain High School measures the dissolved solids of San Pedro Creek, where the school is monitoring increases in riparian plants and changes in water quality from restoration project area that is trying to significantly reduce overgrazing.

We all live downstream and upstream from others in our watershed

By Carol Schrader and Rich Schrader

I'm sure you've heard of "No Child Left Behind," but do you know about the growing support for an alternative view on education reform, sometimes called "No Child Left Inside"?

No Child Left Inside, New Mexico's Outdoor Education Initiative, is part of a national movement catalyzed by the book *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*, by Richard Louv.

As that book explains, this generation of children is spending more time indoors and less time learning from nature in unstructured outdoor play. The average older child spends 6.5 hours per day watching electronic media, and children are six times more likely to play a video game than ride a bike on any given day. Not surprisingly, sales of children's bicycles dropped by 21 percent between 2000 and 2004.

Younger children do not fare much better. The average 2-year-old spends more than four hours a day in front of a TV or computer screen. More than 80 percent of children under age 2 and more than 60 percent of those ages 2 to 5 do not have access to daily outdoor play.

It is not hard to imagine what possible affects this shift in play may have on children. Certainly there is a link to the much-publicized epidemics of obesity and diabetes. Studies have pointed to other health impacts, such as increased risk of heart disease and osteoporosis. And as the title of Louv's

book hints, could there be a link between children's lack of time in nature and Attention-Deficit Disorder?

But what about the even subtler linkages: How will children learn the sense of mystery and wonder that experiences in nature help build, or understand the balance of order and disorder that is embodied in the wild? And how will they be prepared to make critical decisions about stewardship of the earth's resources?

A study by Cornell University professor Nancy Wells found that "participating in wild nature activities before age 11 is a particularly potent pathway toward shaping both environmental attitudes and behaviors in adulthood." Wells' previous

remember watching the wonder of students and the bus driver from Cochiti Middle School as they watched the seemingly barren riparian corridor of the Santa Fe River come alive with frogs, fish, aquatic insects—even a tarantula—when they took enough time to look. The students came to the river on one of their monthly visits through the Watershed Watch program, presented by River Source on behalf of the New Mexico Department of Game and Fish.

river muddier than usual. We were looking above and below areas of disturbance, trying to identify land-use impacts on the river. He and his friends impressed us with their reasoning about why the river seemed muddier below an area with significant disturbance in the watershed. They also made observations about how bare soil of a nearby mine could be stabilized with the roots of vegetation, which would help make the water in the river more clear. We get excited watching students make presentations at 'watershed congresses,' where they help other students and

community members understand that we all live downstream and upstream from other people in our watershed.

Nature inspires creativity in children participating in eight, weeklong Audubon summer camps. One afternoon,

campers all ventured along the beautiful Santa Fe River and talked about the value of storytelling. Children took turns making up wildlife legends. Audubon educator Eileen Everett tells how one budding storyteller explained why bald eagles look bald:

"Once there was a famous and wise man named Benjamin Franklin," the student said. "He was admired by all animals, though he didn't know it. All eagles had brown bodies. The eagle especially admired him—and one particular eagle, whose name was Nelson, really admired him. He imitated Ben so much that one day he decided to become 'bald.' Ben Franklin later protested against the bald eagle being

If you came and you found a strange man... teaching your kids to punch each other, or trying to sell them all kinds of products, you'd kick him right out of the house, but here you are; you come in and the TV is on, and you don't think twice about it.
— Professor Jerome Singer, Yale University

Those who contemplate the beauty of the earth will find reserves of strength for as long as life lasts.
—Rachel Carson, zoologist, author of *Silent Spring*

studies found that access to nature around a home can help protect children against life stress and boost children's cognitive functioning.

Outdoor experiences give students a chance to sharpen their senses and strengthen their understanding of how they relate to their environment. We

One particularly engaged student took measurements of water cloudiness on the Red River. It was spring and the snow was melting fast, which made the

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America's symbol and Nelson was ashamed, but from that day on, bald eagles have been bald."

Youth in the *Sembrando Semillas* (Sowing Seeds) project of the New Mexico Acequia Association learn how traditional New Mexican agricultural practices work with the land, rather than against it. Miguel Santistevan of the Association involves youth from Mora, Taos, Peñasco, and Embudo areas in seasonal acequia-based agriculture practices, including preparing the fields, planting, harvesting, processing of the harvest and ranching. They also express what they are learning in the project through digital storytelling pieces, presentations and print media. The goal is to inspire further exploration of the cultural aspects and future opportunities in acequia agriculture.

Students at the Santa Fe Girls' School grow their problem-solving and leadership skills as they work with Will Barnes of Grassworks to help manage, monitor and restore riparian wetlands on the Santa Fe River. Each grade of students in this program has its own unique set of tasks and projects. The girls learn to do soil monitoring in sixth grade, then plant and animal studies in seventh grade and water chemistry the following year. All the girls participate in stream flow and groundwater monitoring, and also in the long process of Russian Olive removal. Finally, the eighth grade serves as the board of directors for the project, making decisions about restoration strategies and experimental design. Students learn about nature by working outside on a regular basis and by taking personal responsibility for the outcomes of their projects. Resource management issues are made real. The kids are empowered by seeing the ways their work affects and improves their community. They learn that they have a true stake in the neighborhood and the landscape, and that they have something important to contribute.



Fabioloa Rendon and teacher Julian Cisneros of Questa High are fascinated by insects they gathered from the Rio Cabresto. They will gather a sample and identify the insects in the classroom to learn about the health of the watershed.

The broad diversity of groups supporting No Child Left Inside, including government agencies, nonprofits and for-profit companies, offers hope that a strong movement is growing in New Mexico. But the movement also needs support from the grassroots—ranchers, city dwellers, school boards, tribal community leaders, doctors, artists and all parents.

New Mexico's youth need daily opportunities for play and discovery outdoors so that they can make their own connections, whether scientific, spiritual or recreational. We need to engage our youth in food production, protecting special environments such as springs and wetlands, and understanding abiding historical knowledge that only a community can pass on. If we work together to do this, then we will raise a new generation of New Mexicans that will truly know what it means to inhabit our beautiful landscape.

To learn more:

- **Children and Nature Network:** News service and portal to "encourage and support the people and organizations working to reconnect children with nature," www.cnaturenet.org.
- **Hooked on Nature:** Resource materials, workshops and training for "adults who wish to help children develop loving relationships with the earth, each other and all that is." Website includes ideas for activities and experiences to share with children, www.hookedonnature.org.
- **National Wildlife Federation:** The Green Hour Forum, at <http://greenhour.blogspot.com>, provides commentary on and ideas for countering nature deficit disorders in children. Go to www.nwf.org/kids/ to sign up for NWF's monthly e-newsletter with fun, educational activities for your family or classroom.
- **New Mexico's Outdoor Education Initiative:** To get involved in promoting outdoor education in your community, visit <http://outdoor.riversource.net> or contact Rich Schrader at res13131@cybermesa.com.
- **Playing For Keeps:** Research, resources, information and inspiration from a national not-for-profit organization "dedicated to improving outcomes and the quality of life for all children by promoting healthy, constructive play," www.playingforkeeps.org.

