

High Country News

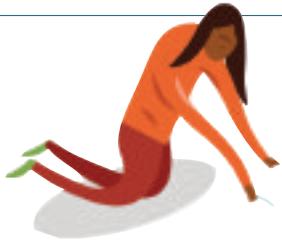
For people who care about the West



Copyright High Country News

January 21, 2013 | \$4 | Vol. 45 No. 1 | www.hcn.org

Learning By Living



URBAN NATURE

A bucket, a beaker and a job

Miguel Luna gives young people the skills to know what's in their water, where it comes from, and why it matters

When Miguel Luna was an 8-year-old in the city of Cúcuta, Colombia, his family sometimes went days without water. The municipality would just shut it off, he recalls. “Nothing would come out of the faucets.” When the water returned, his grandmother, Hercilia, would ceremoniously drink a glass before bedtime. “She’d say to us, ‘Water is the most important thing in the world. We cannot live without it. We have to appreciate it, to protect it.’”

And to do that, he adds, “We have to understand where it comes from.”

Now 40, Luna, who immigrated to the U.S. as a teenager, has spent much of the last decade trying to etch his grandmother’s words into the youthful minds of urban Los Angeles County. He has brought teenagers to the banks of trash-choked city streams, taught them how to collect water samples and test for contaminants. He has led them to the sources of their own tap water: The rivers of the Sierra, the now-dusty valley

that was once Owens Lake. He’s shown them that, despite all the times they’d been told they lived in a desert, their hometown is crisscrossed with streams and creeks, a few of which still haven’t been boxed up with concrete.

He has also taught them to become advocates for clean-running tap water, and for local watering holes that could become clean enough to wade in. And he has begun arming a select few — those who emerge from his teaching sufficiently engaged and willing — with the skills they need to work on behalf of water, as more than just volunteers.

“I started to see that we could go an extra step and say, ‘How do we take this information and put you on track to get a job in this field?’” Luna says. “Because it’s a growing field.” Like much of Southern California, Los Angeles County and many of its 88 cities are in a mad rush to meet stringent new limits on coastal pollution in the next few years, instigating dozens of projects to contain and clean up urban runoff and storm water: soccer fields built over rainwater-capturing cisterns;

engineered swales that let water percolate back into the aquifer.

“All of these projects need people to monitor whether they’re doing well, whether they’re meeting goals of capacity and quality,” Luna says. He was already teaching young people to monitor local water quality. Why not have them monitor these projects for a living?

Goateed and genial, his black hair just beginning to gray, the ever-smiling Luna has the presence of a leader without threatening authority; troubled young people averse to taskmasters cotton to him. “He has charisma,” says one of his former recruits, 20-year-old Cesar Villareal. “You want to be a part of what he’s doing.” Luna got his start in 2002 at the nonprofit group Heal the Bay, where he learned the science of collecting and testing water. Heal the Bay was founded in 1985 to make the polluted Santa Monica Bay safer for surfers and swimmers. But it soon became clear that you couldn’t clean up the bay just by picking up cigarette butts, or even fixing the local sewage plant; you had to travel up the Los Angeles River and deal with its tributaries. And that required reaching out to the people in those upstream communities, many of whom spoke only Spanish and lived in near-poverty.

Luna joined Heal the Bay as a liaison to those Spanish-speaking residents, and soon began to see the value of repairing urban waterways not simply for the sake of the beach, but for the health and welfare of park-poor and flood-prone inland communities. In 2005, he started his own nonprofit, Urban Semillas, to create a cadre of water activists who would show up at meetings held by the county and state water boards. He spent his small budget on stipends instead of flyers. “Sometimes a community member would come to participate in a forum where everyone else was getting paid,” he says. “So why shouldn’t we pay the person with the most valuable information?”

Luna’s passion, however, remained working with young people. “They’re not set in their ways,” he says. “You can change their minds.” So out of Urban Semillas came Agua University, a three-month program in water education for high school students. “Agua University was a mechanism to engage,” he says. “Everything we created had to be interactive — it had to pass the ‘cool’ test.” The curriculum also had to be accessible to teens with limited science education. “We’ve never used the word *watershed*,” Luna says. “But at the end of the course everyone understood what a watershed was. We’ve never referred to watershed management, but everyone understood what it meant that there were stressors on the watershed, and they had to be reduced.”

Miguel Luna takes his grandmother’s message — “Water is the most important thing in the world” — to the young people of Los Angeles County. KCET DEPARTURES, CC VIA FLICKR

BY JUDITH LEWIS MERNIT



Luna brought his students to water sources and encouraged them to ask questions. Why does Malibu Creek, which carves a deep canyon through the still-wild Santa Monica Mountains, look different from Compton Creek, which trickles through a dense urban area? What kind of wildlife returns after the concrete is jackhammered out of a creek like Arroyo Seco? When his students tested water for nitrogen or heavy metals, he'd ask them to find the source: "Is there a nursery nearby? A factory?"

And for two weeks every summer, Agua University students headed out on a camping tour of urban California's water sources: Yosemite, Owens Valley, the California Delta. Once, while visiting with the Winnemem Wintu Tribe at Mount Shasta, one of the kids found a discarded plastic water bottle whose contents had been bottled where they stood. "That had a big impact on us," says Villareal, "because we had just learned that water is sacred for (the tribe). And because so much of their water is used for bottled water, they can't use it the way they used to."

"It was," Luna adds, "a profound spiritual moment."

A handful of Agua University's 118 graduates have gone on to pursue careers they once would have considered off-limits. Villareal, who says he had "no purpose" in high school before the program, now studies civil engineering at Los Angeles Trade Tech College, with hopes of "relating my studies to the environment." Luna's students also saw career possibilities open up as they listened to certain guest speakers. Once, for instance, some divers from the local environmental group Baykeeper came to talk about kelp restoration. "They came in with all this scuba gear," Luna remembers, "and showed them the basics of diving, which they needed to do if they wanted to work on the project. They saw that this person had a job, and it was a fun job. And they started to ask, 'What do I need to do to become scuba certified? Can I save \$500 in my current job so I can do that?'"

Luna went about looking for other jobs that might be within the reach of young people who might not be destined for college. Water-quality testing filled an obvious need, but Luna lacked the laboratory and equipment to produce rigorous data for state or federal agencies. Last winter, however, he secured a \$65,000 grant from Metabolic Studios, a philanthropic organization devoted to science-based restoration, and used the money to launch the Urban Stream Corps in partnership with the Los Angeles Conservation Corps, turning out trained water analysts to work with the state and county.

The grant allowed Luna to set up



a sophisticated laboratory, vetted and approved by the state water board. It also allowed him to pay his recruits for three months of training, during which they collected data at more than 30 sites.

The work was not for everybody. Last May, Luna started out with nine students culled from the Conservation Corps, ranging in age from 18 to 22. All of them came from "tough neighborhoods," and none had been to college. By the time the program ended in July, he was down to four.

"The work was challenging," says Anthony Jackson, 21, one of those four. Collecting water in an urban environment sometimes involves dropping a bucket from a 50-foot bridge and hauling it up; then you have to carefully measure the ratio of liquid to chemical. "You have to be really precise; you have to take it step by step to get the correct results," Jackson says. "One little thing can mess up the whole test."

But Jackson found the work fascinating enough to pursue as at least an interim career. "For me, it's about getting out and doing something that matters in the world," he says. The training also transformed him: "I keep trying to get my dad to stop washing off the driveway with a hose," he says. "I tell him, 'All that water runs into the ocean.'"

Luna himself has hired an Urban Stream Corps graduate, 20-year-old Edgar del Campo, to work part-time at



his own public landscape-design firm, Dake-Luna Consultants. And Luna is in the process of recruiting a new Urban Stream Corps, this time to gather data on dry-weather runoff from the foothills of the San Gabriel Mountains. In the meantime, Agua University continues, as does a more personal project of Luna's: Passing Grandmother Herculía's lessons down to his 16-month-old daughter, Olivia. "She's been visiting the Los Angeles River since she was 4 months old," Luna says. And she already knows how much it matters. "Her first words were 'daddy' and 'mama,'" Luna says. "But her third was *agua*." □

Urban Stream Corps team members Jose Buenrostro, Xzavier Foster, Adriana Media and Anthony Jackson survey the waters of Santa Monica Bay (top). Above, Jose Buenrostro measures tree-canopy cover over a trickle of creek in Las Virgenes Canyon, Malibu, California.

COURTESY MIGUEL LUNA