

Bioremediation in New Orleans

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By Starhawk

I'm just back from another week in New Orleans. This time three of us, myself, Juniper and Scotty, had a special mission—to set up a small bioremediation demonstration as a beginning seed for a long term project. Over Thanksgiving Week, Common Ground has sponsored the Road Trip for Relief, an effort to bring hundreds of volunteers into the Ninth Ward, one of the areas most devastated by Hurricane Katrina.

“Bioremediation” means cleaning soil and water and restoring it to health using biological allies: beneficial bacteria, plants, and fungi. Restoration on the scale of New Orleans is, of course, a huge and overwhelming project. Nevertheless, there are many techniques that are fairly simple, natural, and applicable on a small scale, and Common Ground has been working on a proposal to fund and train a worker's cooperative that would be able to put them into practice.

The first stage of this whole process, of course, is finding out what toxins are actually present. For the last two months, Juniper, an environmental engineer, has been taking soil samples from many areas in New Orleans, getting them tested, and collating data from other organizations. What she's found is that, while there are certainly hot spots of contamination, most of New Orleans is no worse than it was before the flood. Lead and arsenic are fairly common—but they were present before the flood, the result of generations of lead paint on old buildings, auto exhaust, and chemicals applied to lawns to kill dandelions. In some places, anything from oil tanks to household chemicals may have spilled, and residues remain. Water borne disease germs are less of an issue now that most areas have dried out and been exposed to sunlight.

There are two great sources of inspiration for our work this last week. One is Dr. Elaine Ingham, www.soilfoodweb.org, an expert on soil biology and the brewing up of compost teas full of beneficial bacteria that can break down toxins and restore life to the soil. The other is Paul Stamets, www.fungi.com, who does pioneering work on the use of mushrooms and beneficial fungi to clean up toxic soil. Scott Kellogg, who has studied with both of them, works with the Rhizome Collective in Austin, which has transformed an old warehouse into an educational and social center, and is bioremediating a large brownfield (damaged, toxic land) to restore it to health and become an environmental education center. He has studied with both Elaine Ingham and Paul Stametz, and has brought down a pump and barrels to set up a hundred gallon compost tea brewery.

So, over the last week, we've made contact with a number of the really great people in New Orleans who are already doing sustainability work: the New Orleans Farm and

Food Network, Parkway Partners, the Laughing Crow nursery, the Laughing Buddha nursery, and others. We've done a small training for local people at the home of a woman who has already had lead abatement done in her backyard before the hurricane. We've done a training for forty-fifty of the volunteers who have come down for the Roadtrip, and got them all excited and inspired. We've started a small amount of oyster mushrooms growing in coffee grounds, created a Powerpoint on bioremediation and several visual displays, sheet mulched a small piece of ground that was covered with garbage, built a compost bin, and brewed up 100 gallons of bioremediation brew. After I had to leave, Juniper and Scotty led a group to apply the brew to our little sheet mulched patch by the warehouse, and to two other sites that had been identified as needing remediation. We also put in a graywater system for the outdoor showers, consulted on the solar hot water heating and its augmentation by a kettle over a wood fire.

The week went fast. Doing projects in New Orleans, I've found, can be hellish or easy. The easy part is a result of the grim aftermath of the flood: there are lots of resources around to scavenge. It's as if everyone in New Orleans opened their door and shoveled out all or most of their belonging onto the street. They are all ruined and moldy, of course, but among them are things that can be salvaged, wood and building materials that can be reused, and almost anything you might think of. So, in driving around looking for 2 x 4s for the shower builders, I found a huge plastic tub with holes in the bottom, perfect for a compost bin, and an equally large stainless steel tub. Taking a wrong turn on my way to the bridge one morning, I passed a stack of giant cardboard boxes, perfect for sheet mulch. The round, bamboo skeleton of a broken swing chair made a perfect cover for the compost.

The hellish aspect is that if you need something specific, a plumbing part or a valve that fits a particular pipe, and you don't happen to have it, the hardware and plumbing stores that are open are usually far away and suck energy like collapsing dwarf stars. Enter in, and you may never emerge. After frustrating hours in the Home Depot Line, you escape gratefully, and almost always immediately remember something you forgot to buy. If you don't remember it at that moment, you remember it as soon as you get back to the worksite.

The solar showers, cobbled together out of the innards of discarded water heaters, plywood boxes and pieces of plastic, fed with enormously long hoses, were simple in design but extremely complicated to put together. And at best, they would provide a very inadequate amount of hot water for the number of people who needed to shower. We're praying for a miracle, like the lamp of sacred oil in the Chanukah story, enough to last only for a day that lasted eight days. I'm telling the Goddess that if she makes that sixty gallons of possibly only lukewarm water provide hot showers for a hundred and fifty people, I'll declare a new festival in her honor, and every year we'll make little replicas of solar hot water heaters and give presents to dirty children. But just in case, we build a firepit.

The police in Algiers have continued to harass Common Ground. One morning they arrest Jimmy, a sweet-faced young man who looks as innocent and sunny as an eight year old child, for double parking while he is loading supplies from the depot. This takes time and energy to deal with, just as we are preparing for the arrival of the hordes

of willing workers. But in the ninth ward, the police are more chill. New Orleans has a law that police have to live in the districts where they work, so the Ninth Ward cops have all lost their homes, and many have lost friends and family members. They appreciate that people have come down here to help.

The other heavenly part of work down here is that you get to hang out with people at their best—people who have come to do something good for other people, who have volunteered to live in uncomfortable conditions and take on some truly nasty, dirty jobs—cleaning out black mold, for instance—just because they want to help. There's always a lot of stress in these situations, and people don't always get along perfectly. There are irritations and frustrations. But overall, it's just really, really good to be with people who are actively doing something to help a really bad situation.

And their work inspires generosity. Kaysey and Nick from the Covington Farmers' Market come down and cook our opening meal. She had offered to cook a meal for us but didn't originally bargain on feeding a hundred and fifty of our friends. But she graciously rose to the occasion, producing a fragrant and delicious meal of rice and beans with fresh produce and fresh-baked breads. Meanwhile, a group from the Mission from Minnesota who have been sending truckloads of supplies down to Mississippi for weeks manages to get more donations than they need, and spends the money on eight hundred pounds of turkey for Common Ground's Thanksgiving feast.

Generosity generates abundance. That's something the idealogues of greed don't get. "Solidarity, not charity" is Common Ground's motto, and people feel good when they are standing in solidarity with others, giving of themselves, doing something instead of feeling helpless. The tragedy and destruction here have been immense.

But so is the hope.