

## SPECIAL SECTION: GOING GREEN IN THE CERAMICS STUDIO JUNE 2010 OREGON POTTERS' ASSOCIATION NEWSLETTER

For each issue of the Newsletter, we choose a theme and ask our membership to send in their information about that theme. Feel free to suggest themes and send in any and all information that you can. We are hoping to have this be an informative "must read" section of your Newsletter. Got ideas? Send them to [JanetBuskirk@gmail.com](mailto:JanetBuskirk@gmail.com). The August Newsletter theme will be "Red." It will discuss how to get red color in ceramics, primarily in glaze but maybe you do other reds? All temperatures and atmospheres will be represented. Please start getting your ideas, formulas and techniques together.

**"GOING GREEN"** is a catch-phrase that we hear everywhere. My utility bills arrive in the mail with information that leads me to believe that it is "green" to use more power. My garbage service has a motto that implies that it is "green" to create garbage.

Most potters are environmentally conscious, yet somehow in our own studios we often do not live up to the environmental expectations that we have for other, larger, corporations. We say that it is too expensive or time consuming to truly be "green." Would we accept that excuse from a lead paint manufacturer in our own neighborhood? If the answer is "no," then we must each examine our own studio practices and our own environmental views, and make some changes. This section contains ideas and resources to help the studio potter with this project.

**SCRAP GLAZE, LESS GLAZE WASTE DOWN THE DRAIN** *submitted by Laurie Childers:* At our Linn-Benton Community College ceramics studio in Corvallis, we have about a dozen 35-gallon buckets of glazes, and another half-dozen 5 gallon buckets of trial glazes or less-popular mixes. Being a teaching facility, there is more "changing of the mind" and mistakes that require the glaze to be washed off than in a production studio. And any studio has ladles, pitchers, brushes, and sponges that get glaze on them. To keep the washed glaze from going into the sewer system/river, we got a 12 gallon bucket and marked it "Scrap Glaze." This is an old idea but somehow we had not been doing it, probably because before we had our new facility we were so cramped for space. We filled it 3/4 with water and put a note on the lid for people to rinse the glaze from their tools into this bucket - with the exception of Shino glazes. Shino glazes have ash (lye) in them and will not mix with other glazes, but they could have their own scrap glaze bucket. It took about 9 months for the first bucket to collect enough material to test. We also used the cleaned up glaze material from the spray booth. To our surprise and delight, without any additions, the scrap glaze came out a soft iron green when thick and a medium/dark brown when thin. It breaks nicely and gives us a good forest green color we've been wanting. A student named it Loden (a la Land's End Catalogue) and it became very popular. More people became aware of the scrap bucket and now use it every time. The second iteration of scrap glaze collected in less time and came out very similar. We are doing a bit to help the rivers and we also get a free glaze for minimal effort.

**MIXING GLAZES WITHOUT MAKING TOXIC WASTE** *Submitted by Janet Buskirk:* A very simple technique I use to keep waste to a minimum when I mix glazes is this: I do not add all of the water to the glaze while I am initially mixing it. Then, I clean all of my glaze mixing tools (whisk, screen, scoops, etc) with a small amount of water and add that water to the glaze. Everything ends up clean, and no glaze materials go down the drain.

**MIRROR BLACK GLAZE:** *This is a beautiful glaze that I make from my scrap glaze bucket. I use cone 10 glazes, but this or something similar might work at other temperatures. My typical scrap glaze, before adding colorants, is a translucent brown or dark green. Submitted by Janet Buskirk*

1 liquid quart of scrap glaze  
20 g cobalt carb  
6g chrome ox  
20g red iron ox

**MATTE BLUE GLAZE:** *This is a dark, stoney matte. I make it from a combination of my scrap glaze, Waxy Matte glaze, and cobalt carbonate. I fire it to cone 10. Submitted by Janet Buskirk*

First, mix Waxy Matte (cone 10):

Custer Feldspar	41
Silica	20
Dolomite	7
Gerstley Borate*	12
EPK	5
Talc	15

Add: Cobalt carbonate 1

\* I use Laguna Borate instead of Gerstley Borate

*Mix the Waxy Matte with the appropriate amount of water. Then, mix 5 parts of the Waxy Matte with 8 parts Scrap glaze. For me, this makes a nice stoney blue. You may need to add a bit more cobalt or adjust the ratio of Waxy Matte to Scrap glaze.*

*ENVIRONMENTAL HEALTH & SAFETY IN THE ARTS: A Guide for K-12 Schools, Colleges and Artisans: Proper Management of Waste and Residuals from Art Studios and Shop Practices.* Prepared by Pratt Institute. This book discusses art material safety, storage, disposal, and many other things and is available online at <http://www.epa.gov/Region2/children/k12/english/art-1of5.pdf>. It is the result of a lawsuit brought against the Pratt Institute for the mis-handling of art supplies. As part of the settlement, they prepared this book. It is a great resource for all art media. Below is an excerpt of their section about the legal and safe disposal of mixtures containing ceramic colorants:

“You need to consult the MSDSs and other specific information from the manufacturer to find out exactly which [metallic oxides] are present. For example, if barium, cadmium, chromium, lead, selenium or silver are present, wastes containing these glazes may be RCRA-regulated and these waste glazes must be disposed of as hazardous waste. Spills and debris containing these glazes, whether from floors or work surfaces, must also be collected and disposed of as hazardous waste.

“... In addition to the RCRA toxicity characteristic metals listed above, a common colorant, vanadium pentoxide, used as a yellow high fire colorant, is regulated as a hazardous waste when disposed of. Excess or off-spec vanadium pentoxide (CAS No. 1314-62-1) is regulated under RCRA as an “acute hazardous waste” and, as such, it must be manifested using the waste code P120 and it may raise the facilities hazardous waste generator category (see explanation in Section 3.) Vanadium pentoxide is often sold to potters in a paper sack with the name of the chemical hand-written with a marker on the sack.”

**SMOKELESS WOODFIRE:** Ceramic Arts Daily, the daily email service, had an interesting article on the Sasukenei Smokeless Wood Kiln. If you are a woodfire potter and would like to decrease your carbon emissions, check this out. It is excerpted from *Japanese Wood-Fired Ceramics* by Masakazu Kusakabe and Mark Lancet. The article had basic diagrams of the kiln and information about how it's fuel efficiency and lack of smoke. The link for the article is at <http://ceramicartsdaily.org/firing-techniques/wood-kiln-firing/the-sasukenei-smokeless-kiln-a-wood-kiln-that-produces-little-smoke-and-great-results/>.

*SUSTAINABLE CERAMIC PRACTISE* is the subject of a series of articles in the March 2010 *Ceramics Monthly*. One article discusses the methods used at University of Oregon to capture soluble and insoluble metals from glaze waste. They used a series of buckets for rinsing, starting with the dirty rinse bucket and gradually rinsing in cleaner buckets. The insoluble material forms a slurry which is mixed 1:1 with clay slurry and made in to pavers. The soluble material is dried out and also added to the paver mix. This article also mentions how other universities recycle old ceramic pieces, use waste oil for firings, and other tips.

**DRYING GREENWARE** *submitted by Ann Brucker:* I like to use the heat from my electric kilns right after they fire off to help dry clay art works waiting to go in the next load. I do this by placing the clay work on top of the kiln lids. Depending on the work I may lay down cookie cooling racks first to allow hot air to radiate underneath clay works.

I also load greenware into the warm kiln immediately after unloading. Then close lid with only top and bottom spy holes open.

Both of these steps saves on pre-heating energy and costs, as I am using the heat already radiating from the kiln lids and from the warm shelves to dry out work. If I have student work that is extra thick on the bottom I place it on a 3 pronged stilt to allow for even drying.

With top and bottom spyholes open I check for moisture by holding my fettling knife flat across the opening of the top spyhole. If your kiln has an exhaust fan underneath it you 'll need to turn the fan off and wait a minute for heat to flow out of the top spyhole.

If condensation appears I wipe off and take a second reading. If no more condensation appears I begin to pre-heat the kiln at 200 degrees F and continue to check for condensation to be absent on the knife as I increase temperature to 300-350degrees F. Then I go ahead and fire the kiln. With lots of student work going through my kilns I can't afford to have any losses in my firing process.

Ann teaches Fine Art Lessons out of her studio called Mosaic Arts Loft. Classes include wheel throwing, clay sculpting, handmade mosaics, drawing and painting. [www.mosaicartsloft.com](http://www.mosaicartsloft.com)

**WASTE VEGETABLE OIL AS KILN FUEL** *submitted by Careen Stoll:* As you may know, my kiln runs on waste vegetable oil, which is about a green fuel as I know. I use about 2/3 cord of wood and 70 gallons of oil to fire my round downdraft hardbrick soda kiln with 55 cubic feet of stacking space. The kiln also has a chamber under the chimney that acts as a sutama chamber, burning off excess carbon before it leaves the chimney. This is just a sketch, if you need more information, go to my website

<http://cathouseclay.com/node/6>. The site is under construction, so my apologies, but the text of the pages is accurate, and I have photos if you need them.

**USING RAIN WATER IN THE STUDIO** *submitted by Ken Pincus:* My "going green" idea that I have been using for as long as I have had my studio building (nearly 20 years) comes out of necessity. I have no water line plumbed to the studio, and so my water supply is the roof gutter rain spout. This spout drains half the studio roof, and the rain water falls directly into a regular 55 gal. clean plastic can (a typical garbage can). I then draw from that can as needed and fill smaller buckets for studio use.

The only drawback of this system is that in the dry months, my collection can dries up and I need to augment with supply water from a hose. I have not done any rough calculations, but over 19 years of using rain water for my studio work, I am sure I've saved 1000s of gallons of water.

**COMPOSTING GLAZE; GAS FIRING & LIGHTING TIPS** *submitted by Adrienne Stacey:* Actually I am doing a couple of things which may or may not be good ideas. Feedback would be great! I dry my old glazes or mistakes out and sprinkle them in my compost. It will be about two years in the compost before I spread it on my garden. My glazes are cone 10 and I make them myself, so I know there is no lead or really nasty stuff in them. I also have a clay trap and put that guck in my compost too. *Editor's note: This would only be appropriate if you mixed your own glazes and were very familiar with all of the ingredients. Read the MSDS (Material Safety Data Sheets) for your ingredients, especially the colorants and fluxes. MSDS are available through your ceramic supplier.*

At the end of my Cone 10 gas firing, I turn down the gas both during the final reduction (and close the damper a bit more than I used to) and then turn the gas practically off while I'm clearing the atmosphere.

I frequently work with just a light by my wheel that I can adjust, so I don't have to turn all of the studio lights on. I also use full spectrum lights (fluorescence) which are easier on the eye.

**HAZARDOUS WASTE ROUNDUP:** If you have hazardous waste in the studio, you can get rid of it on Saturday, Sept. 11 at a cleanup day. Waste can be taken to Montavilla Baptist Church, 9204 SE Hawthorne Blvd in Portland. In the Portland Metro area, you can also take hazardous waste to any of the Waste Transfer Stations. They treat waste from a home and waste from a commercial enterprise differently, so call them first to ask what you should do.