Environmental Considerations: Disposal of Paint Waste Water

Artists' Workshop is instituting 2 paint waste water disposal processes at our studio facility. These processes apply to the dirty water that is created when painting with watercolor, gouache and acrylic or when using glue in a mixed media project. Oil painters will not pour pigments or solvents into the sink and will dispose of their waste by removing it from the site.

Why are we doing this?

As artists, we want to help in keeping our groundwater as unpolluted as possible.

Additionally, our lease requires it. The Wildlife Foundation of Florida is our landlord and the following statement is in our lease:

"Sub-sublessee shall not use, generate, store, produce, place, treat, release, or discharge any contaminants, pollutants, or pollution, including, but not limited to, hazardous or toxic substances, chemicals, or other agents (except those used, stored, generated, and disposed of by sub-lessee in the operation of its allowed use of the sub-subleased premises) on, into, or from the sub-subleased premises or any adjacent lands or waters. Sub-sublessee shall only use, store, generate, and dispose of such hazardous substances in strict accordance with the law."

The EPA holds a non-household facility, like Artists' Workshop, to tighter disposal restrictions than it would for a household.

What does this mean to us?

We have consulted Jennifer Stirk, an environmentalist at the Tomoka Landfill about proper disposal of our wastewater. She told us that 1) **we cannot dump waste water onto the ground**. 2) She also said that any waste water containing toxic substances cannot be poured down the sinks or disposed of in the Tomoka landfill. The list of EPA toxic substances is: **arsenic, barium, cadmium, lead, mercury and selenium**. Cobalt is not on this list and "hues" of these are usually ok, such as "Cadmium Yellow Hue" as they are made of other yellows, not using cadmium. 3) It is best to discard a solid instead of washing everything down a drain. Allow unneeded paint to dry on the palette or in the jar and discard it in the trash. 4) Acrylic pigments cannot be poured down the sinks.

What are we doing to address this?

We will be using 2 processes, the **pigment disposal process** and the **sand disposal method.** The first method is described on the "Just Paint" newsletter March 1996 from Golden Paint. The second process has been recommended by Kevin Tobin, a Golden Paint representative. Watercolor, gouache and glue waste water can be emptied into our sinks as long as no toxic substances are present. (If using glue with an acrylic project, it is recommended that the artist keep the glue water separate and pour it down the drain. It doesn't pour well through the filter system in the pigment disposal process.) The pigment disposal process can be used for acrylic waste water as long as no toxic chemicals are present. The sand method can be used for both watercolor waste and acrylic waste either with or without toxic substances.

In both instances, artists need to wipe their brushes and palettes on paper towels and rags before rinsing in the water to reduce the amount of water used. These paper towels and rags will be put in the Tomoka Landfill garbage for proper disposal in the landfill. Once wiped off, rinse out the brushes in no more than two inches of water in your waste water container.

Pigment Disposal Process

This process uses a chemical reaction called flocculation to separate the water and the pigment. Once the clear water is skimmed off the top, the pigment is filtered and the filter is disposed of in the trash. **This process cannot be used with toxic paints.**

It uses common garden chemicals which are hazardous so read label precautions. Gloves are provided.

The instructions are as follows:

1. Dump your waste water into the 5 gallon container in the studio filling it to either the one or 2.5 gallon level. 2.5 gallons is the maximum that can be processed in the 5 gallon container.

2. Using the glass jar, mix the proper amount of aluminum sulfate into the jar, add a few ounces of clean water and mix thoroughly. For one gallon, use a well-rounded half Tablespoon. For 2.5 gallons of water, measure 1.5 Tablespoons. Pour into the waste water and stir vigorously with a wood paint stick.

3. Add the proper amount of powdered lime and stir vigorously. For one gallon, this is a scant ¾ Tablespoon. For 2.5 gallons of water, measure 1 ¾ Tablespoon lime.

Within a few minutes, flocculation of the solids should begin to occur. You should start to see a clear layer of water forming very quickly as the solids settle to the bottom. If, after several minutes, flocculation has not occurred, repeat steps 2 and 3.

4. After the solids have settled, scoop off as much of the clear water as you can, using the pitcher, and pour it down the drain or outside.

5. Assemble the filtering equipment as follows: Place TWO filters in the metal funnel and put them over another empty 5 gallon container. Pour the remaining dirty water onto the filters after flocculation has occurred. After the dirty water has been poured through the filters, the water in the 5 gallon container should be clear. If it is not, pour less into the filters in steps and let it filter through before adding more dirty water.

5. Place the used filters into the garbage can with the other waste going to the Tomoka Landfill. The clean water in the 5 gallon container can now be poured outside on the ground or down the sinks.

Sand Disposal Method:

This process uses evaporation of the water out of the sand in a bucket.

Instructions are as follows:

An alternative method is available for disposing of waste water resulting from washing off brushes used for acrylic paints. There is an orange 5-gallon container in the large (north) studio filled 3/4rds of the way up with playground sand. During classes and open studio sessions, the bucket will be kept outside in the full sun. It is important that the bucket receive 5-6 hours of sunlight and that the lid be kept open (assuming it's not raining). In the event of rain, the bucket will be kept indoors and, when not in use, a lid has been provided only if it must be kept outdoors. A 'dent' was first made in the top middle of the sand. After each day's session, monitors or instructors are asked to simply turn over the sand lightly and restore the depression in the top surface of the sand.

As acrylic artists paint and need to clean off their brushes, they should first wipe them off on rags, paper towels or old phone books. We will attempt to keep some old phone books in the studios for our use. Once wiped off, rinse out brushes in NO MORE THAN TWO INCHES of water in your waste water container. No more water than this is needed to rinse off brushes and it is critical to the success of this process that acrylic artists don't use too much water. It doesn't matter if you use Cadmium-, Cobalt- or lead-based paints, or mix your colors with medium. The waste water is then poured into the sand bucket, which is, ideally, going to be kept outdoors during studio hours. The bucket should be kept in a sunny location, one which gets between 5-6 hours of sun per day, and in the event of rain, under an eave or awning to protect it.

The bucket has been placed on a luggage cart with wheels so that it can be moved easily in rainy season/weather to a shielded area. The sand bucket should be kept

uncovered, and at the end of the day, brought indoors to one of our studios. Thanks to the sun, the waste water evaporates, leaving only the pigmented sand behind. Periodically (as mentioned above), the sand should be turned over with the trowel. This method is advocated as an alternative by Golden paint and by one of its artist representatives, Kevin Tobin. Kevin has used his sand bucket without ever recycling the sand for twenty years. In fact, he brought it here from CA! If the AWI ever needed to get rid of the sand (but it would never need to do that), Kevin has advised that it would need to cover the bucket and take it to a hazardous waste dump site. Golden alternatively suggested using the pigmented sand to create a sculpture from concrete. Kevin developed this method after consulting the local DEP and federal EPA.

The trick is to ensure that folks don't use a lot of water in their buckets (no more than 2") and that they first wipe off brushes of excess acrylic paint/medium before dunking them in rinse water. If artists use too much water or don't wipe off excess paint, the sand method will not work.

Assuming our 5-gallon bucket works out, we will purchase another one or two containers for the sand method. Everyone's cooperation in introducing this alternative method is requested.