

## **ASSISTANCE GUIDELINES** **Potters for Peace Ceramic Water Filter**

### **Objectives of the Program**

**Potters for Peace (PFP)**, as a Member of The International Network to Promote Household Water Treatment and Safe Storage of the World Health Organization, is dedicated to meeting *UN Millennium Development Goal 7, Target 10*: to halve the number of people without access to clean drinking water by the year 2015. We do this by training our partners to manufacture a proven, affordable ceramic water filter that removes microbiological contaminants from polluted water.

### **Introduction**

**Potters for Peace (PFP)** is contacted frequently by people and organizations seeking to become connected to the Ceramic Water Filter Project. We have over 10 years of involvement with ceramic water filters and facilitating filter projects around the world. We have seen first hand what works and, fortunately, we've also learned what hasn't worked.

**PFP** acts as a clearing house of information gathered by staff, researchers, and world-wide contacts, sharing existing knowledge with those interested in implementing filter facilities. **PFP** does not build or own any filter facilities, does not sell filters, and does not have funds to create new facilities. Instead, we focus upon *technology transfer* to create a "*social franchise*" in partnership with our counterparts. A *social franchise* is operated for the common good, is self-sustaining, and is run for benefit of the owners, workers, and end-users of the enterprise. A *social franchise* may be public or private, for-profit or not-for-profit, but, unlike a standard business franchise, it is operated with a recognition of the importance of the "ownership stake" of the end users, the people in need of potable drinking water.

Once a *social franchise* has been established between the local organization and **PFP**, we provide the technical assistance and training necessary to set up a filter production facility. Besides the initial partnering, training, and technical assistance, we can also provide assistance in follow-up and monitoring, referrals for academic health studies, sample marketing materials, and periodic visits and evaluations.

To meet the objectives of the filter program, we strongly suggest that a potential counterpart partners with an established local pottery workshop. Partnering with the local enterprise offers the ability to begin with a legally incorporated entity, and to make the most of local know-how, a proven clay source, financial administration, buildings, equipment, communications, and perhaps an existing distribution system. With a well-equipped and experienced workshop, a smaller initial investment is required, and production and marketing of the filters can be initiated faster.

## **Costs**

### ***How much does a Filter production facility cost?***

Although the start-up cost of a filter making facility can vary widely according to what resources are already in place PFP generally uses the figure of \$1,000 to \$30,000. These are minimums, and would include recommended machinery, infrastructure construction, paying for a PFP trainer, new employees, raw materials and the resources necessary for that very important ingredient for success---marketing. The latter cannot be over emphasized, PFP's model for filter production is that of a sustainable business, this simply can't happen without marketing. Initial filter sales may be to local NGO and/or development organizations but even these will not be fully realized without marketing. Eventually, NGO sales will slow and a sales effort will have to be directed to the wider public.

With successful marketing will come the need to expand the filter workshop, so again, the figures given above should be considered minimum start-up costs.

### ***PFP trainer costs***

Because **PFP's** prime purpose is to promote potable water the world over, we use a sliding scale to address the issue of payment for our trainers' time and expertise. In general, our trainers require a basic fee. In addition, local partner organizations are expected to cover the costs of international and local transportation, room and board, and translation services if needed.

### **PFP can:**

- Carry out a short feasibility study.
- Help make connections between interested parties in desired development regions, via telephone, written, and e-mail communication.
- Offer on-location consultations and support in developing filter facilities, including building or purchasing required equipment.
- Offer in-house training and technical assistance, in established workshops or in other sites.
- Develop a viable, quality controlled filter using locally available materials.
- Provide digital examples and templates to assist in developing printed instructional, health, and promotional materials.
- Suggest ways to make the project environmentally and economically sustainable.
- Offer ongoing technical support, via email and follow-up on-site consultations, including sourcing natural materials and industrial supplies.
- Continue to work with organizations involved in production, education, follow-up, or monitoring, via e-mail, telephone, or follow-up visits.
- Continue to provide new information and results from new research about the filter and its use in communities, via email and the PFP website.
- Provide contact information and coordinate interchanges with other filter projects, fostering the sharing of knowledge and a sense of community among filter facilities.

### **To Begin the Application Process**

Before contacting us with your questions, we request that interested persons or organizations familiarize themselves with the following documents, which are available in the sub-pages on our website's [filters](#) page

- [Filter Facility Best Practices](#): PFP periodically evaluates the Ceramic Water Filter Project, and the pertinent information is collated and updated in this document. Find this on the [filter project evaluation](#) sub-page.
- [Alethia Environmental study: Report 1 "Intrinsic Effectiveness"](#) Although this study totals over 70 pages, the most relevant information is contained in the [Summary of Alethia Environmental study](#). Both documents can be found on the [studies](#) sub-page, nos. 1, 3.
- [Cambodia Field Tests of CWP](#): This report an evaluation of three projects. It will give you an idea of practical situations that can be encountered in the field. Find this document on the [studies](#) sub-page, no. 8.

These studies will answer most frequently asked questions. They include much valuable information that can help you realistically assess any challenges that you may face.

After you have read these studies, please fill out the questionnaire below and email the answers to Jennifer Mally (ExecutiveDirector@PottersForPeace.org). You will be contacted by a PFP staff member to help evaluate and further guide your project.

### **QUESTIONNAIRE**

*The following questions highlight steps you can take to ensure your project's success:*

- A. Understanding the local situation is key to a successful project.
  - What water sources do most locals use?
  - What are the impurities that must be removed?
  - Do people currently filter, boil, chlorinate, or otherwise purify their water?
  - What other purification methods are locally available? At what price?
  - What studies have been done to learn if people in the local community are receptive to the idea of using this or any kind of water filter?
  - Have they traditionally used ceramic water jugs for storage in the past?
  - What is the climate? Is there a rainy season? How long?
  - Is the area politically stable?
  - Identify local laboratories capable of conducting water quality tests.

B. We recommend partnering with an existing pottery or brick-making workshop, ideally one that would have experience with marketing and health. Utilizing competent local potters will help ensure project success.

- Is there presently a relationship between the potters or pottery collective and the sponsoring organization?
- What kind of pottery do they produce? What temperature do they fire to?
- Do they have a history of being able to meet quotas?
- Do local potters also have the experience and ability to fabricate lidded clay receptacles with a 5 to 7 gallon (18 to 30 liter) capacity?
- How far are the potters' sites from the sponsoring organization's operations?
- How will management of the facility be structured? It will be very important to have a highly involved liason responsible for management and communications between the two groups.
- How will employees/skilled labor be paid? By whom?
- What is the distance between the factory site and the market (projected distribution area)?

C. Having a sustainable marketing plan is even more critical than the initial level of funding.

- Who will provide the financial resources (\$1,000-\$30,000 USD) for start up?
- How many visits by **PFPP** consultants including airfare, per diem and stipend have been budgeted?
- Who will provide the on-going business loans or subsidies for marketing? For inventories of plastic components? How large is their in-country staff?
- What is the procedure for attaining approval and/or quality recognition from the Ministry of Health?
- Identify local health promoters/NGOs through which the filter can be marketed in bulk. Contact them to evaluate their interest in the product.
- Identify a local print shop to make brochures; instructional stickers; and educational, health, and marketing materials.

D. Communications.

- Does the ceramic workshop communicate through the internet?
- Does the site have internet access?
- Do they have a website?
- Does anyone there speak, read, and write English?

E. The availability of facilities and suppliers can also determine project sustainability.

- How far from the workshop is an adequate and affordable clay supply?
- Is the clay able to shaped easily?
- How do the potters presently process their clay?
- How far away is the site located from an adequate and affordable source of fuel and combustible (burnout) materials?
- How will the clay, fuel, and combustible materials be transported, by whom, and at what cost?
- Does the site have electricity? For how many hours a day?
- What voltage and amperage is consistently available?

- Does the site have piped water or a consistent water supply? How often is water unavailable?
- Are high quality bricks available for kiln building? What sizes are available?
- Is there a machine shop where repair items can be fabricated nearby?
- Are there any restrictions on the importation of colloidal silver?
- Is there a nearby source of affordable plastic bags?
- Identify your local or foreign supplier of plastic five gallon (18 liter) pails and oversized lids; price, and availability.
- Identify your local or foreign supplier of plastic faucets; price, and availability.

Equipment:

Please study the list and pictures on the website. Is there:

- A hammer mill
- A hydraulic press
- A clay mixer
- A pug mill
- A kiln (please indicate interior size, type of fuel used, and firing temperature)
- Production and storage space (indicate square footage of each)
- Shelving for filters

Workshop:

- Date established
- Type of production
- Forming or production method(s) utilized
- Number and size of kilns
- Equipment currently installed
- Electrical: Voltage and amperage available
- Water availability
- Number of men and women workers
- Vehicles
- How pottery presently is marketed and distributed

**Potters for Peace** wants to work with you to create a social enterprise that will be not only sustainable, but profitable for all involved, and especially to the benefit of those most in need of potable drinking water. We have found that the presence of the above conditions all contribute to a successful project, but we recognize that you may not initially be able to obtain them all without help. Please let us know which of these items you will be able to put in place yourself, and which items you think will require our assistance. Let's get started!